

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

AIR QUALITY OPERATING PERMIT

Permit No. 180TVP01
Application No. 180
Administrative Revision: September 26, 2002

Issue Date: August 27, 2001
Expiration Date: August 26, 2006

The Department of Environmental Conservation, under the authority of AS 46.14 and 18 AAC 50, issues an operating permit to the Permittee, **Kodiak Electric Association, Inc.**, for the operation of the **Nyman Power Plant**.

This permit satisfies the obligation of the owner and operator to obtain an operating permit as set out in AS 46.14.130(b).

As required by AS 46.14.120(c), the Permittee shall comply with the terms and conditions of this operating permit.

All terms and conditions of Air Quality Construction No. 0025-AC026 have been incorporated into this Operating Permit. Under AS 46.14.290, the Permittee is considered in compliance with applicable requirements of this Construction Permit to the extent allowed under 42 U.S.C. 7661c(f) (Clean Air Act, sec. 504(f)) by complying with this Operating Permit.

John F. Kuterbach, Manager

Air Permits Program

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List of Abbreviations Used in this Permit

AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
AS	Alaska Statutes
ASTM	American Society for Testing and Materials
C.F.R.	Code of Federal Regulations
COMS	Continuous Opacity Monitoring System
dscf	Dry standard cubic feet
EPA	US Environmental Protection Agency
gr./dscf	grain per dry standard cubic feet (1 pound = 7000 grains)
GPH	gallons per hour
HAPs	Hazardous Air Pollutants [hazardous air contaminants as defined in AS 46.14.990(14)]
ID	Source Identification Number
kPa	kiloPascals
MACT	Maximum Achievable Control Technology
NESHAPs	Federal National Emission Standards for Hazardous Air Pollutants [as defined in 40 C.F.R. 61]
NSPS	Federal New Source Performance Standards [as defined in 40 C.F.R. 60]
ppm	Parts per million
PS	Performance specification
PSD	Prevention of Significant Deterioration
RM	Reference Method
SIC	Standard Industrial Classification
SO ₂	Sulfur dioxide
TPH	Tons per hour
TPY	Tons per year
VOC	volatile organic compound [as defined in 18 AAC 50.990(103)]
wt%	weight percent

Section 1. Identification**Names and Addresses**

Permittee: **Kodiak Electric Association, Inc.**
P. O. Box 787
Kodiak, Alaska 99615-0787

Facility: **Nyman Power Plant**

Location: UTM–Zone 5, Northing 6,398.800 km; Easting 529.480 kmt

Physical Address: Seafarer Drive
Building 12 Annex
USCG Integrated Support Complex Kodiak, Kodiak, AK

Owner: Kodiak Electric Association, Inc.
P. O. Box 787
Kodiak, Alaska 99615-0787

Operator: Kodiak Electric Association, Inc.
P. O. Box 787
Kodiak, Alaska 99615-0787

Permittee's Responsible Official: Mr. Wes Hillman

Designated Agent: Mr. Wes Hillman
Kodiak Electric Association, Inc.
P. O. Box 787
Kodiak, Alaska 99615-0787

Facility and Building Contact: **Kodiak Electric Association, Inc.**
Mr. Larry Van Meter
P. O. Box 787
Kodiak, Alaska 99615-0787
(907) 486-7700
keap@ptialaska.net

Fee Contact: Mr. Larry Van Meter
Kodiak Electric Association, Inc.
P. O. Box 787
Kodiak, Alaska 99615-0787

SIC Code of the Facility:

4931 - Electric Services

[18 AAC 50.350(b), 1/18/97]

Section 2. General Emission Information

Emissions of Regulated Air Contaminants, as provided in the Permittee's application:

Particulate Matter (PM-10), Sulfur Oxides (SO₂), Nitrogen Oxides (NO_x), Carbon Monoxide (CO), Volatile Organic Compounds (VOC) and insignificant quantities of other air contaminants.

Operating Permit Classifications:

1. 18 AAC 50.325(b)(1)
2. 18 AAC 50.325(b)(3)
3. 18 AAC 50.325(c)

Facility Classifications as described under 18 AAC 50.300(b)-(f):

1. 18 AAC 50.300(c)(1)

[18 AAC 50.350(b), 1/18/97]

Section 3. Fee Requirements

- 1. Assessable Emissions.** The Permittee shall pay to the department annual emission fees based on the facility's assessable emissions as determined by the department under 18 AAC 50.410. The assessable emission fee rate is set out in 18 AAC 50.410. The department will assess fees per ton of each air contaminant that the facility emits or has the potential to emit in quantities greater than 10 tons per year. The quantity for which fees will be assessed is the lesser of

1.1 the facility's assessable potential to emit of 439 tpy (249 tons of NO_x, 160 tons of SO₂, 19 tons of CO and 11 tons of VOC); or

1.2 the facility's projected annual rate of emissions that will occur from July 1 to the following June 30, based upon actual annual emissions emitted during the most recent calendar year or another 12 month period approved in writing by the department, when demonstrated by

- a. an enforceable test method described in 18 AAC 50.220;
- b. material balance calculations;
- c. emission factors from EPA's publication AP-42, Vol. I, adopted by reference in 18 AAC 50.035; or
- d. other methods and calculations approved by the department.

[18AAC50.400 - 420 & 18 AAC 50.350(c), 1/18/97]

- 2. Assessable Emissions Estimates.** Emission fees will be assessed as follows:

2.1 no later than March 31 of each year, the Permittee may submit an estimate of the facility's assessable emissions to ADEC, Air Permits Program, ATTN: Assessable Emissions Estimate, 410 Willoughby Ave., Juneau, AK 99801-1795; the submittal must include all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the department can verify the estimates; or

2.2 if no estimate is received on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit set out in condition 1.1.

[18AAC50.410 & 18 AAC 50.350(c), 1/18/97]

Section 4. Source Inventory and Description

Sources listed below have specific monitoring, record keeping, or reporting conditions in this permit. Source descriptions and ratings are given in Table 1 for identification purposes only.

Table 1 Source Inventory

ID	Source Name	Source Description	Rating/size	Install Date
1	Diesel Generator	DeLaval DSR-48(4,222Hp)	3,035 kW	1978
2	Turbine	Solar Taurus 60-T7301S, SoLoNOx	6,200 kW	May, 1999
3	Blackstart Generator	Cat. 3306B	250 kW	May, 1999
4	Fuel Oil Storage	Tank # 1	27,000 gallon	1999
5	Fuel Oil Storage	Tank # 2	27,000 gallon	1999

Section 5. Source-Specific Requirements**Fuel-Burning Equipment***Visible Emissions*

3. The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from Source IDs 1-3 to reduce visibility through the exhaust effluent by greater than 20% for more than three minutes in any one hour.

Monitor, record and report according to Section 13.

[18 AAC 50.055(a)(1), 1/18/97; 18 AAC 50.350(d)(1)(C), 6/21/98; & 18 AAC 50.350(g) – (i), 1/18/97]

Particulate Matter

4. The Permittee shall not cause or allow particulate matter emitted from Source IDs 1-3 to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

Monitor, record and report according to Section 13.

[18 AAC 50.055(b)(1), 1/18/97; 18 AAC 50.350(d)(1)(C), 6/21/98; & 18 AAC 50.350(g) – (i), 1/18/97]

Sulfur Compound Emissions

5. The Permittee shall not cause or allow sulfur compound emissions, expressed as SO₂, from Source IDs 1-3 to exceed 500 ppm averaged over three hours.

[18 AAC 50.055(c), 1/18/97; 18 AAC 50.350(d)(1)(C), 6/21/98]

5.1 Diesel Fuel:

- a. Use a grade of fuel that limits sulfur content to no more than 0.5 percent by weight, such as DF-1 or DF-2.
- b. Obtain a statement or receipt from the fuel supplier for each fuel shipment received that certifies either the fuel sulfur content or that the fuel grade is DF-1 or DF-2. If a certificate is not available from the supplier, then analyze a representative sample of the fuel to determine the sulfur content using ASTM method D129-00, D1266-98, D1552-95, D2622-98, D4294-98, D4045-99 or an alternative method approved by the department.
- c. Report under condition 53 whenever fuel combusted does not meet the 0.5% requirements of condition 5.1a; this fuel sulfur content is the basis of the SO₂ potential to emit in condition 1.1. When reporting under this condition, include a material balance calculation of the sulfur compound emissions, in ppm of SO₂, expected from this fuel, made using the equations in Section 15.
- d. Report under condition 53 if a three-hour exhaust concentration, calculated under condition 5.1c, exceeds 500 ppm of SO₂.

- e. Record the fuel sulfur content or the fuel grade of each shipment required under condition 5.1b and record all material balance calculations required under condition 5.1c.
- f. Attach copies of the records required by condition 5.1e with the facility operating reports required by condition 55.

[18 AAC 50.350(g)-(i), 1/18/97]
[18 AAC 50.410(c), 1/18/97]

BACT Limits for DeLaval Generator (Source ID 1)

6. The Permittee shall limit emissions from Source ID 1 to:

- 6.1 no more than 113.5 lb of nitrogen oxides (NO_x) per hour;
- 6.2 no more than 318.1 tons of NO_x per year by complying with the operating limits in conditions 22.1 and 22.2;
- 6.3 no more than 30.5 lb of carbon monoxide (CO) per hour; and
- 6.4 no more than 132 tons of CO per year by complying with the operating limits in conditions 22.1 and 22.2.

[Construction Permit No. 0025-AC026, 1/8/01]
[18 AAC 50.350(d)(1)(D), 1/18/97]
[EPA PSD X79-10, 8/20/79]

Operation of Blackstart Generator (Source ID 3)

7. The Permittee shall operate Source ID 3 only to provide power for startup or orderly shutdown of Unit #1 or Unit #2 during loss of station service and during periodic inspection and maintenance.

- 7.1 List in the Facility Operating Report required by condition 55, the date, time duration and purpose for operating Source ID 3.
- 7.2 Limit the fuel use as stipulated in condition 22.1

[Construction Permit No. 0025-AC026, 1/8/01]
[18 AAC 50.350(d)(1)(D), 1/18/97]

Operating and Preventive Maintenance Procedures (Source IDs 1-3)

8. The Permittee shall develop and implement standard operating and preventive maintenance procedures for each fuel burning equipment source in Table 1.

[Construction Permit No. 0025-AC026, 1/8/01]

The Permittee shall keep a copy of the procedures available at a location within the facility that is readily accessible to operators of the equipment and to authorized representatives of the department.

[Construction Permit No. 0025-AC026, 1/8/01]
[18 AAC 50.350(d)(1)(D), 1/18/97]
[18 AAC 50.350(h), 1/18/97]

Federal New Source Performance Standards, Subpart A (Source ID 2)

9. Maintain records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of Source ID 2, any malfunctions of associated air-pollution control equipment, and any periods during which a continuous monitoring system or monitoring device for Source ID 2 is inoperative.

[18 AAC 50.040(a)(1), 7/2/00]
[Federal Citation: 40 C.F.R. 60.7(b), 7/1/99]

10. The Permittee shall notify the department and the EPA:

10.1 no later than 30 days after commencement of construction or reconstruction; and

[Federal Citation: 40 C.F.R. 60.7(a)(1), 7/1/99]
[18 AAC 50.040(a)(1), 7/2/00]

10.2 no more than 15 days after startup.

[Federal Citation: 40 C.F.R. 60.7(a)(3), 7/1/99]
[18 AAC 50.040(a)(1), 7/2/00]

11. **Good Air Pollution Control Practice.** At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate Source ID 2 including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the department which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance records, and inspections of Source ID 2.

[18 AAC 50.040(a)(1), 7/2/00]
[Federal Citation: 40 C.F.R. 60.11(d), 7/1/99]

12. For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the requirements of 18 AAC 50.040(a)(V)(2), nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether Source ID 2 would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

[18 AAC 50.040(a)(1), 7/2/00]
[Federal Citation: 40 C.F.R. 60.11(g), 7/1/99]

13. The Permittee shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of a standard set forth in conditions 15–21. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged to the atmosphere.

[18 AAC 50.040(a)(1), 7/2/00]
[Federal Citation: 40 C.F.R. 60.12, 7/1/99]

Volatile Organic Liquid Storage Vessels (Source IDs 4-5)

- 14.** For Source IDs 4 – 5, the Permittee shall keep readily accessible records for the life of the tank showing the dimensions and an analysis showing the capacity of the storage vessel.

[18 AAC 50.040(a)(2)(M), 7/2/00]

[Federal Citation: 40 C.F.R. 60.110b(a)&b(c) & 40 C.F.R. 60.116b(a)-(b), 7/1/99]

Turbines Subject to NSPS Subpart GG (Source ID 2)

- 15.** The corrected exhaust gas concentration of NO_x in ppm from Source ID 2 shall not exceed 214 ppmvd when firing diesel fuel.

[18 AAC 50.040(a)(2)(V), 7/2/00]

[Federal Citation: 40 CFR 60.332(a), 7/1/99]

- 15.1** To compute the nitrogen oxides emissions, Permittee shall use analytical methods and procedures that are accurate to within 5 percent and are approved by the EPA Administrator to determine the nitrogen content of the fuel being fired.

[18 AAC 50.040(a)(2)(V), 7/2/00]

[Federal Citation: 40 CFR 60.335(a) & (e), 7/1/99]

- 15.2** The Permittee may use a third party in accordance with 40 CFR 60.335(e) to determine fuel nitrogen and sulfur content.

[Construction Permit No. 0025-AC026, 1/8/01]

[Federal Citation: 40 CFR 60.335(e) & 40 CFR 60.335(f)(1), 7/1/99]

- 16.** Since the most recent source test results are less than 80% of the applicable limits in 40 CFR§60.332, the Permittee shall conduct subsequent a source test on Source ID 2 no later than May 3, 2005.

[18 AAC 50.350(g)-(i), 1/18/97]

[18 AAC 50.220(a)-(c), 1/18/97]

[Federal Citation: 40 CFR 60.8, 7/1/99]

[18 AAC 50.040(a)(1), 7/2/00]

- 17.** The exhaust gas concentration of SO₂ from Source ID 2 shall not exceed 150 ppmvd corrected to 15 percent O₂ or the fuel sulfur content shall not exceed 0.8 percent by weight.

[18 AAC 50.040(a)(2)(V), 7/2/00]

[Federal Citation: 40 CFR 60.333(a) & (b), 7/1/99]

- 18.** Permittee shall monitor sulfur content and nitrogen content of the fuel being fired in the turbine.

- 18.1** The frequency of determination of the sulfur content and nitrogen content of the fuel shall be as follows: (1) If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined on each occasion that fuel is transferred to the storage tank from any other source. (2) If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. Owners, operators or fuel vendors may develop custom schedules for determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the EPA Administrator before they can be used to comply with conditions 15 or 17.

[18 AAC 50.040(a)(2)(V), 7/2/00]

[Federal Citation: 40 CFR 60.334(b)(1) & (2), 7/1/99]

- a. The sulfur content of the fuel shall be determined using ASTM D 2880-71 for liquid fuels and ASTM D 3031-81, D 4084-82, or D 3246-81 for gaseous fuels.

[18 AAC 50.040(a)(2)(V), 7/2/00]

[Federal Citation: 40 CFR 60.335(d), 7/1/99]

[18 AAC 50.350(g), 1/18/97]

- b. Report per condition 53 any daily period during which the sulfur content of the fuel being fired exceeds 0.8 percent.

[Federal Citation: 40 CFR 60.7(c) & 60.334(b)(2), 7/1/99]

[18 AAC 50.350(i), 7/2/00]

- 19.** The Permittee may propose an alternative to the reference methods in accordance with 40 CFR 60.335(f)(1).

[Construction Permit No. 0025-AC026, 1/18/01]

- 20.** Report per condition 53 when the emission limits in conditions 15 or 17 are exceeded.

[18 AAC 50.350(i), 7/2/00]

[18 AAC 50.040(a)(2)(V), 7/2/00]

[Federal Citation: 40 C.F.R. 60.333(a) & (b), 7/1/99]

- 21.** For source ID 2, attach to the operating report required by condition 55 a copy of each quarterly excess emission and monitoring systems performance report under condition 53.

[18 AAC 50.040(a)(1), 7/2/00]

[Federal Citation: 40 CFR 60.7(c), 7/1/99]

Section 6. Facility-Wide Requirements

PSD Avoidance Limits

The Permittee requested conditions 22 through 26 for the installation of Source IDs 2 & 3, in order to avoid classification as a Prevention of Significant Deterioration Major Facility.

Fuel Limits

22. The Permittee shall limit fuel consumption as follows:

- 22.1 Limit Source ID 1 fuel consumption by the following equation: for any consecutive 12-month period

$$F_{\text{Source ID 1}} = 1,060,000 - (0.107 * F_{\text{Source ID 2}}) - (0.043 * F_{\text{Source ID 3}})$$

Where: F is the fuel consumption for each unit, gallons.

- 22.2 The Permittee shall monitor fuel consumption of Source ID 1 & 2 using a calibrated fuel flow meter. The fuel use may be estimated by calculations approved by the department or by measuring the tank fuel level in the event the meter is inoperable.

- 22.3 The Permittee shall monitor fuel consumption of Source ID 3 by either measuring the tank fuel level or with a calibrated fuel flow meter.

[Construction Permit No. 0025-AC026, 1/8/01]
[18 AAC 50.350(d)(1)(D), 1/18/97]

- 22.4 The Permittee shall install fuel meters required by conditions 22.2 and 22.3 no later than ninety days after the issue of this permit.

[18 AAC 50.350(g), 1/18/97]

- 23.** The Permittee shall submit a copy of the manufacturer's certification of accuracy for each fuel meter within 90 days after meter installation. Fuel meters must be calibrated and certified to be accurate to $\pm 5\%$.

[Construction Permit No. 0025-AC026, 1/8/01]

- 24.** The Permittee shall limit emissions from Source ID 2 to no greater than 22.1 lb per hour and 96 ppm NO_x by using SoLoNO_x controls.

[Construction Permit No. 0025-AC026, 1/8/01]

- 25.** The Permittee shall maintain records of the following for Source IDs 1–3:

25.1 the fuel consumed in each source per month;

25.2 the power produced from each unit per month; and

25.3 a copy of the fuel meter(s) certification, if applicable.

25.4 submit summaries of the records of condition 25 under condition 55.

[Construction Permit No. 0025-AC026, 1/8/01]
[18 AAC 50.350(h), 1/18/97]

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- 26.** Report under condition 53 whenever the Permittee exceeds the limits, for fuel consumption volume or the summation period of twelve-consecutive months, in condition 22.1.

[Construction Permit No. 0025-AC026, 1/8/01]
[18 AAC 50.350(i), 1/18/97]

Section 7. Insignificant Sources

This section contains the requirements that the Permittee identified under 18 AAC 50.335(q)(2) as applicable to insignificant sources at the facility. This section also specifies the testing, monitoring, reporting, and recordkeeping for insignificant sources that the department finds necessary to ensure compliance with the applicable requirements. Insignificant sources are not exempted from any air quality control requirement or federally enforceable requirement, except that the requirements of conditions 53 and 55 do not apply to this section.

As set out in 18 AAC 50.350(m), the shield of AS 46.14.290 does not apply to insignificant sources.

- 27.** The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from an industrial process, fuel-burning equipment, or an incinerator to reduce visibility through the exhaust effluent by greater than 20% for more than three minutes in any one hour.

[18 AAC 50.050(a)(2) & 18 AAC 50.055(a)(1), 1/18/97]

- 28.** The Permittee shall not cause or allow particulate matter emitted from an industrial process or fuel-burning equipment to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

[18 AAC 50.055(b)(1), 1/18/97]

- 29.** The Permittee shall not cause or allow sulfur compound emissions, expressed as SO₂, from an industrial process or fuel-burning equipment, to exceed 500 ppm averaged over three hours.

[18 AAC 50.055(c), 1/18/97]

- 30.** Based on reasonable inquiry, the Permittee shall certify compliance with the requirements specified in conditions 27, 28, and 29 as set out in condition 56.

[18 AAC 50.350(m)(3), 9/4/98]

Section 8. Generally Applicable Requirements

- 31. Asbestos NESHAP.** The Permittee shall comply with the requirements set forth in 40 C.F.R. 61.145, 61.150, and 61.152, and the applicable sections set forth in 40 C.F.R. 61, Subpart A and Appendix A.

[18 AAC 50.040(b)(3) & 18 AAC 50.350(d)(1), 1/18/97]
[Federal Citation: 40 C.F.R. 61, Subpart M, 12/19/96]

- 32. Refrigerant Recycling and Disposal.** The Permittee shall comply with the standards for recycling and emission reduction of refrigerants set forth in 40 C.F.R. 82, Subpart F.

[18 AAC 50.040(d) & 18 AAC 50.350(d)(1), 1/18/97]
[Federal Citation: 40 C.F.R. 82, Subpart F, 7/1/97]

33. Good Air Pollution Control Practice.

33.1 At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate sources IDs 1, 2 and 3 including affected air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the department which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

33.2 The Permittee shall maintain and operate air pollution control equipment according to the manufacturer's recommendations. If manufacturer's recommendations are not available the Permittee shall operate the equipment according to an operation and maintenance plan. The Permittee shall revise the plan if requested by the department.

33.3 The Permittee shall keep records of maintenance performed and a copy of any manufacturer's procedures and operation and maintenance plans for the sources listed in condition 33.

[18 AAC 50.030, 12/30/00 & 18 AAC 50.350(f)(2)-(3), 1/18/97]

- 34. Dilution.** The Permittee shall not dilute emissions with air to comply with this permit.

[18 AAC 50.045(a), 1/18/97]

- 35. Bulk Materials Handling, Construction and Industrial Activities.** The Permittee shall take reasonable precautions to prevent particulate matter from being emitted into the ambient air as a result of industrial activities, construction projects, or the handling, transportation, and storage of bulk materials.

[18 AAC 50.040(e), 7/2/00, 18 AAC 50.045(d) & 18 AAC 50.350(d)(1), 1/18/97]

35.1 Keep records describing all precautions taken to prevent particulate matter from becoming airborne due to any of the activities described in this condition. If the precautions taken by the Permittee are not listed in the State Air Quality Control Plan, also record a statement describing why the Permittee finds the precaution reasonable. Reasonable precautions, as listed in the State Air Quality Control Plan, include

- a. installation and use of hoods, fans, and dust collectors to enclose and vent the handling of dusty materials;
- b. use of water or chemicals for dust control in the demolition of existing structures, construction operations, road grading, or land clearing; and
- c. application of asphalt, oil, water, or suitable chemicals on dirt roads, material stockpiles and other surfaces which can create airborne dusts.

[18 AAC 50.040(e), 7/2/00 & 18 AAC 50.350(g) – (h), 1/18/97]

35.2 At least once each month, perform visual surveys of fugitive particulate matter sources by

- a. conducting a survey of all bulk materials handling, construction and industrial activities at the facility for the potential of airborne particulate matter in accordance with the procedures listed in 40 C.F.R. 60, Appendix A, RM 22; and
- b. within 2 days of discovering that particulate matter emissions are leaving the property at a level which potentially could unreasonably interfere with the enjoyment of life or property, be injurious to human health or welfare, animal or plant life, or property, or cause an exceedance of a PM-10 ambient air quality standard or increment contained in 18 AAC 50.010(1) or 18 AAC 50.020(b)(2), initiate corrective actions to prevent emissions from leaving the property; and
- c. keep contemporaneous records of all visual surveys performed and corrective actions taken to prevent particulate matter emissions from leaving the property; submitting summaries of the records with the facility operating report required by condition 55; and
- d. report under condition 53 whenever a visual survey reveals that particulate matter emissions at levels specified in condition 35.2b are leaving the property.

[18 AAC 50.350(g) – (i), 1/18/97]

36. Stack Injection. The Permittee shall not release materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack at a source constructed or modified after November 1, 1982, unless approved in writing by the department.

[18 AAC 50.055(g) & 18 AAC 50.310(m), 1/18/97]

37. Open Burning. The Permittee shall comply with the following requirements when conducting open burning at the facility.

- 37.1 Open burning of asphalt, rubber products, plastics, tars, oils, oily wastes, contaminated oil cleanup materials, or other materials in a way that gives off black smoke is prohibited without written approval of the department in accordance with the procedures set forth in 18 AAC 50.065.

[18 AAC 50.040(e), 7/2/00, 18 AAC 50.065(b) & 18 AAC 50.350(d)(1), 1/18/97]

- 37.2 Open burning or incineration of pesticides, halogenated organic compounds, cyanic compounds, or polyurethane products in a way that gives off toxic or acidic gases or particulate matter is prohibited.

[18 AAC 50.040(e), 7/2/00, 18 AAC 50.065(c) & 18 AAC 50.350(d)(1), 1/18/97]

- 37.3 Open burning of putrescible garbage, animal carcasses, or petroleum-based materials, including materials contaminated with petroleum or petroleum derivatives, is prohibited if it causes odor or black smoke that has an adverse effect on nearby persons or property.

[18 AAC 50.040(e), 7/2/00, 18 AAC 50.065(d) & 18 AAC 50.350(d)(1), 1/18/97]

- 37.4 Open burning is prohibited in an area if the department declares an air quality advisory under 18 AAC 50.245, stating that open burning is not permitted in that area for the day.

[18 AAC 50.040(e), 7/2/00, 18 AAC 50.065(e) & 18 AAC 50.350(d)(1), 1/18/97]

- 37.5 When conducting open burning, the Permittee shall ensure that

- a. the material is kept as dry as possible through the use of cover or dry storage;
- b. before igniting the burn, noncombustibles are separated to the greatest extent practicable;
- c. natural or artificially induced draft is present;
- d. to the greatest extent practicable, combustibles are separated from grass or peat layer;
- e. combustibles are not allowed to smolder; and
- f. sufficient written records are kept to demonstrate that the Permittee complies with the limitations in this condition. Upon request of the department, submit copies of the records.

[18 AAC 50.040(e), 7/2/00, 18 AAC 50.065(a), 18 AAC 50.350(d)(1) & 18 AAC 50.335(g) – (h), 1/18/97]

- 38. Air Pollution Prohibited.** The Permittee shall not cause any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property.

[18 AAC 50.040(e), 7/2/00, 1/18/97; 18 AAC 50.110, 5/26/72; & 18 AAC 50.350(d)(1), 1/18/97]

- 38.1 Within 24 hours of receiving a complaint that is attributable to emissions from the facility, investigate the complaint, and

-
- 38.2 Within 48 hours of receiving a complaint, initiate necessary corrective actions to alleviate or eliminate the cause of the complaint.

[18 AAC 50.240(c) & 18 AAC 50.350(g), 1/18/97]

- 38.3 Keep records of the date, time, and nature of all complaints received and summary of the investigation and corrective actions undertaken for complaints attributable to emissions from the facility. Upon request of the department, submit copies of the records.

[18 AAC 50.350(h) – (i), 1/18/97]

- 39. Technology-Based Emission Standard.** If an unavoidable emergency, malfunction, or non-routine repair, as defined in 18 AAC 50.235, causes emissions in excess of a technology-based emission standard listed in conditions 15, 17 and 32, the Permittee shall take all reasonable steps to minimize levels of emissions that exceed the standard.

[18 AAC 50.235(a) & 18 AAC 50.350(f), 1/18/97]

- 40. Permit Renewal.** To renew this permit, the Permittee shall submit a complete application under 18 AAC 50.335 no sooner than **February 26, 2005** and no later than **February 26, 2006** to renew this permit.

[18 AAC 50.335(a), 1/18/97]

Section 9. General Source Testing and Monitoring Requirements

- 41. Requested Source Tests.** In addition to any source testing explicitly required by this permit, the Permittee shall conduct source testing as requested by the department to determine compliance with applicable permit requirements.

[18 AAC 50.220(a), 18 AAC 50.345(a)(10), 1/18/97]

- 42. Operating Conditions.** Unless otherwise specified by an applicable requirement or test method, the Permittee shall conduct source testing

42.1 At a point or points that characterize the actual discharge into the ambient air; and

42.2 At the maximum rated burning or operating capacity of the source or another rate determined by the department to characterize the actual discharge into the ambient air.

[18 AAC 50.220(b) & 18 AAC 50.350(g), 1/18/97]

- 43. Reference Test Methods.** The Permittee shall use the following as reference test methods when conducting source testing for compliance with this permit:

43.1 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(a) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60.

[18 AAC 50.040(a), 7/2/00, 18 AAC 50.220(c)(1)(A) & 18 AAC 50.350(g), 1/18/97]
[Federal Citation: 40 C.F.R. 60, 7/1/99]

43.2 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(b) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 61.

[18 AAC 50.040(b), 18 AAC 50.220(c)(1)(B) & 18 AAC 50.350(g), 1/18/97]
[Federal Citation: 40 C.F.R. 61, 7/1/97]

43.3 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(c) must be conducted in accordance with the source test methods and procedures specified in 40 C.F.R. 63.

[18 AAC 50.040(c), 18 AAC 50.220(c)(1)(C) & 18 AAC 50.350(g), 1/18/97]
[Federal Citation: 40 C.F.R. 63, 7/1/97]

43.4 Source testing for the reduction in visibility through the exhaust effluent must be conducted in accordance with the procedures set out in Section 14.

[18 AAC 50.030, 12/30/00; 18 AAC 50.220(c)(1)(D) & 18 AAC 50.350(g), 1/18/97]

43.5 Source testing for emissions of particulate matter, sulfur compounds, nitrogen compounds, carbon monoxide, lead, volatile organic compounds, fluorides, sulfuric acid mist, municipal waste combustor organics, metals, and acid gases must be conducted in accordance with the methods and procedures specified 40 C.F.R. 60, Appendix A.

[18 AAC 50.040(a)(4), 7/2/00 18 AAC 50.220(c)(1)(E) & 18 AAC 50.350(g), 1/18/97]
[Federal Citation: 40 C.F.R. 60, Appendix A, 7/1/99]

43.6 Source testing for emissions of PM-10 must be conducted in accordance with the procedures specified in 40 C.F.R. 51, Appendix M.

[18 AAC 50.035, 18 AAC 50.220(c)(1)(F) & 18 AAC 50.350(g), 1/18/97]
[Federal Citation: 40 C.F.R. 51, Appendix M, 7/1/97]

43.7 Source testing for emissions of any contaminant may be determined using an alternative method approved by the department in accordance with Method 301 in Appendix A to 40 C.F.R. 63.

[18 AAC 50.040(c), 7/2/00, 18 AAC 50.220(c)(2) & 18 AAC 50.350(g), 1/18/97]
[Federal Citation: 40 C.F.R. 63, Appendix A, Method 301, 7/1/99]

44. Excess Air Requirements. To determine compliance with this permit, standard exhaust gas volumes must only include the volume of gases formed from the theoretical combustion of fuel, plus the excess air volume normal for the specific source type, corrected to standard conditions (dry gas at 70° F and an absolute pressure of 760 millimeters of mercury).

[18 AAC 50.220(c)(3), 18 AAC 50.350(g) & 18 AAC 50.990(88), 1/18/97]

45. Test Plans. Before conducting any source tests, the Permittee shall submit a plan to the department. The plan must include the methods and procedures to be used for sampling, testing, and quality assurance, and must specify how the source will operate during the test and how the Permittee will document this operation. A complete plan must be submitted within 60 days of receiving a request under condition 41 and at least 30 days before the scheduled date of any tests.

[18 AAC 50.345(a)(10), 18 AAC 50.350(b)(3) & 18 AAC 50.350(g), 1/18/97]

46. Test Notification. At least 10 days before conducting a source test, the Permittee shall give the department written notice of the date and time the source test will begin.

[18 AAC 50.345(a)(10) & 18 AAC 50.350(b)(3), 1/18/97]

47. Test Reports. Within 45 days after completing a source test, the Permittee shall submit two copies of the results, to the extent practical, in the format set out in the *Source Test Report Outline* of Volume III, Section IV.3 of the State Air Quality Control Plan, adopted by reference in 18 AAC 50.030(8). The Permittee shall certify the results as set out in condition 49.

[18 AAC 50.345(a)(10), 18 AAC 50.350(b)(3) & 18 AAC 50.350(h) – (i), 1/18/97]

48. Particulate Matter Calculations. In source testing for compliance with the particulate matter standards in conditions 4 and 28, the three-hour average is determined using the average of three one-hour test runs.

[18 AAC 50.220(f) & 18 AAC 50.350(g), 1/18/97]

Section 10. General Recordkeeping, Reporting, and Compliance Certification Requirements

- 49. Certification.** The Permittee shall certify all reports, compliance certifications, or other documents submitted to the department under this permit by including the signature of a responsible official for the permitted facility following the statement: “Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.” For the same six-month reporting period, the excess emission and permit deviation reports submitted under condition 53 may be certified with the facility operating report required by condition 55. All other reports must be certified upon submittal.

[18 AAC 50.205, 18 AAC 50.345(a)(9), 18 AAC 50.350(b)(3) & 18 AAC 50.350(i) 1/18/97]

- 50. Submittals.** Unless otherwise directed by the department or this permit, the Permittee shall send reports, compliance certifications, and other documents required by this permit to ADEC, Air Permits Program, 610 University Ave., Fairbanks, AK 99709-3643, ATTN: Compliance Technician.

[18 AAC 50.350(i), 1/18/97]

- 51. Information Requests.** The Permittee shall furnish to the department, within a reasonable time, any information the department requests in writing to determine whether cause exists to modify, revoke and reissue, or terminate the permit or to determine compliance with the permit. Upon request, the Permittee shall furnish to the department copies of records required to be kept by this permit. The department, in its discretion, will require the Permittee to furnish copies of those records directly to the federal administrator.

[18 AAC 50.200, 18 AAC 50.345(a)(8), 18 AAC 50.350(b)(3) & 18 AAC 50.350(g) – (i), 1/18/97]

- 52. Recordkeeping Requirements.** The Permittee shall keep all records required by this permit for at least five years after the date of collection, including

52.1 Copies of all reports and certifications submitted pursuant to this section of the permit.

52.2 Records of all monitoring required by this permit, and information about the monitoring including

- a. calibration and maintenance records, original strip chart or computer-based recordings for continuous monitoring instrumentation;
- b. sampling dates and times of sampling or measurements;
- c. the operating conditions that existed at the time of sampling or measurement;
- d. the date analyses were performed;
- e. the location where samples were taken;
- f. the company or entity that performed the sampling and analyses;

- g. the analytical techniques or methods used in the analyses; and
- h. the results of the analyses.

[18 AAC 50.350(h), 1/18/97]

- 53. Excess Emission and Permit Deviation Reports.** The Permittee shall report all emissions or operations that exceed or deviate from the requirements of this permit or that present a potential threat to human health or safety as soon as possible, but no later than 48 hours, after discovery of the event. The report must include the information listed on the form contained in Section 16. The Permittee may use this form to report emissions under this condition.

[18 AAC 50.235(a)(2), 18 AAC 50.240(c) & 18 AAC 50.350(i), 1/18/97]

- 54. NSPS and NESHAP Reports.** The Permittee shall submit to the department copies of reports, required by conditions 15, 18 and 20 as they apply to the facility, as follows:

- 54.1 Attach a copy of any NSPS and NESHAPs reports submitted to the U.S. Environmental Protection Agency (EPA) Region 10 to the facility operating report required by condition 55.
- 54.2 The Permittee shall notify the department and provide a written copy of any U.S. EPA granted waiver of the federal emission standards, record keeping, monitoring, performance testing, or reporting requirements, or approved custom monitoring schedules within 30 days after receipt of a waiver or schedule. Keep a copy of each U.S. EPA issued monitoring waiver or custom monitoring schedule with the permit at the facility.

[18 AAC 50.040, 7/2/00 & 18 AAC 350(i)(2), 1/18/97]
[Federal Citation 40 C.F.R. 60 & 40 C.F.R. 61, 7/1/99]

- 55. Facility Operating Reports.** During the life of this permit, the Permittee shall submit an original and two copies of an operating report by August 1 for the period January 1 to June 30 and by February 1 for the period July 1 to December 31. Facility operating reports must include copies of the records required to be reported by the conditions of this permit. In addition, facility operating reports must include a listing of all excess emissions and permit deviations that occurred during the reporting period and must identify

- 55.1 the date of the deviation;
- 55.2 the equipment involved;
- 55.3 the permit condition;
- 55.4 a description of the deviation; and
- 55.5 any corrective action or preventive measures taken and the date of such actions.

[18 AAC 50.350(d)(4), 18 AAC 50.350(f)(3) & 18 AAC 50.350(i), 1/18/97]

- 56. Annual Compliance Certification.** Each year by February 1, the Permittee shall compile and submit to the department an original and two copies of an annual compliance certification report as follows:

-
- 56.1 For each permit term and condition set forth in Section 3 through Section 10, including terms and conditions for monitoring, reporting, and recordkeeping:

[18 AAC 50.350(d)(4), 1/18/97]

- a. certify the compliance status over the preceding calendar year consistent with the monitoring required by this permit;
- b. state whether compliance is intermittent or continuous; and
- c. briefly describe each method used to determine the compliance status.

- 56.2 Submit a copy of the report directly to the U.S. EPA-Region 10, Office of Air Quality, M/S OAQ-107, 1200 Sixth Avenue, Seattle, WA 98101.

[18 AAC 50.350(j), 1/18/97]

Section 11. Standard Conditions Not Otherwise Included in the Permit

- 57.** Consistent with Alaska law, for purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any standard in this permit, nothing in this permit precludes the use of any credible evidence or information relevant to whether the facility would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed. If this condition applies to an NSPS source, then the requirements of 40 C.F.R. 60.11(g) as adopted in 18 AAC 50.040(a)(1) also apply.

[18 AAC 50.350(f)(3), 1/18/97]

- 58.** The Permittee must comply with each permit term and condition. Noncompliance constitutes a violation of AS 46.14, 18 AAC 50, and the Clean Air Act, except for those requirements designated as not federally-enforceable, and is grounds for:

58.1 an enforcement action,

58.2 permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280, or

58.3 denial of an operating-permit renewal application.

[18 AAC 50.345(a)(1) & 18 AAC 50.350(b)(3), 1/18/97]

- 59.** It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or condition.

[18 AAC 50.345(a)(2) & 18 AAC 50.350(b)(3), 1/18/97]

- 60.** Each permit term and condition is independent of the permit as a whole and remains valid regardless of a challenge to any other part of this permit.

[18 AAC 50.345(a)(3) & 18 AAC 50.350(b)(3), 1/18/97]

- 61.** Compliance with permit terms and conditions is considered to be compliance with those requirements that are:

61.1 included and specifically identified in the permit, or

61.2 determined in writing in the permit to be inapplicable.

[18 AAC 50.345(a)(4) & 18 AAC 50.350(b)(3), 1/18/97]

- 62.** The permit may be modified, reopened, revoked and reissued, or terminated for cause. A request by the Permittee for modification, revocation and reissuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any operating permit condition.

[18 AAC 50.345(a)(5) & 18 AAC 50.350(b)(3), 1/18/97]

- 63.** The permit does not convey any property rights of any sort, nor any exclusive privilege.

[18 AAC 50.345(a)(6) & 18 AAC 50.350(b)(3), 1/18/97]

64. The Permittee shall allow an officer or employee of the department or an inspector authorized by the department, upon presentation of credentials and at reasonable times with the consent of the owner or operator, to:

- 64.1 enter upon the premises where a source subject to the operating permit is located or where records required by the permit are kept,
- 64.2 have access to and copy any records required by the permit,
- 64.3 inspect any facilities, equipment, practices, or operations regulated by or referenced in the permit, and
- 64.4 sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.

[18 AAC 50.345(a)(7) & 18 AAC 50.350(b)(3), 1/18/97]

65. The Permittee shall keep a copy of this permit, the State Air Quality Control Regulations 18 AAC 50, and Alaska Statutes 46.14, at the permitted facility.

[Construction Permit No. 0025-AC026, 1/8/01]

Section 12. Permit As Shield from Inapplicable Requirements

In accordance with AS 46.14.290, this section of the permit contains the requirements determined by the department not to be applicable to the permitted facility.

- 66.** The department has determined that the facility is not subject to the requirements set forth in 40 C.F.R. 72 Acid Rain Program, because Alaska is exempt from the Acid Rain Program.

[18 AAC 50.350(l), 1/18/97]

- 67.** The department has determined that the facility is exempt from the requirements set forth in 40 C.F.R. 82 (except Subpart F) because the facility does not manufacture, produce, transform, import, export, service, sell or distribute Class I or Class II substances regulated under this rule.

[18 AAC 50.350(l), 1/18/97]

- 68.** The department has determined that Source IDs 4 - 5 are not subject to the requirements set forth in 40 C.F.R. 60 Subpart A. This determination is based upon certification by the Permittee that Source IDs 4 - 5 store a volatile liquid with a maximum true vapor pressure less than 3.5 kPa and are exempt from the provisions of this subpart.

[18 AAC 50.350(l), 1/18/97]

- 69.** The department has determined that Source IDs 4 - 5 are not subject to the requirements set forth in 40 C.F.R. 60 Subparts K and Ka. This determination is based upon certification by the Permittee that these tanks were installed prior to the applicability dates of Subparts K and Ka.

[18 AAC 50.350(l), 1/18/97]

- 70.** The department has determined that Source IDs 4 - 5 are not subject to the requirements set forth in 40 C.F.R. 60 Subpart Kb sections 60.112b through 60.115b. This determination is based upon certification by the Permittee that Source IDs 4 - 5 store a volatile liquid with a maximum true vapor pressure less than 3.5 kPa and are exempt from the provisions of this subpart.

[18 AAC 50.350(l), 1/18/97]

Section 13. Visible Emissions and Particulate Matter Monitoring Plan

Visible Emissions Observations for Liquid Fuel and Natural Gas Fired Source IDs 1-3

- 71.** As provided in Table 2, the Permittee shall observe the exhaust of Source IDs 1, 2 and 3 for visible emissions using either the Method-9 Plan or the Smoke/No-Smoke Plan. The Permittee may change visible-emission plans for a source at any time. Upon permit issuance start visible emissions monitoring with the Initial Monitoring Frequency.

Table 2 Visual Observation Methods

	Method-9 Plan	Smoke/No Smoke Plan
Initial Monitoring Frequency	<p>Within six months after the issue date of this permit or within seven calendar days after changing from the Smoke/No-Smoke Plan, whichever is later, and at least monthly (semiannually for pipeline quality natural gas fired sources) that a source operates thereafter, observe its exhaust for six minutes to obtain 24 individual 15-second opacity readings in accordance with Section 14.</p> <ul style="list-style-type: none"> • If two or more individual 15-second readings during the six-minute observation period are greater than 20% opacity, then continue the Method-9 observations for an additional 12 minutes for a total of 18 minutes. • If four or more individual 15-second readings during the 18-minute observation period are greater than 20% opacity, then continue the Method-9 observations for an additional 42 minutes for a total of 60 minutes. 	<p>During each calendar day (quarterly for pipeline quality natural gas fired sources) that a source operates, observe the exhaust for the presence or absence of visible emissions, excluding condensed water vapor. Record the following information in a written log for each observation and submit copies of the records upon request of the department:</p> <ul style="list-style-type: none"> • the date and time of the observation; • from Table 1 of this permit, the ID of the source observed; • whether visible emissions are present or absent in the exhaust; • if the source starts operation on the day of the observation, the startup time of the source; and • name and title of the person making the observation.

	Method-9 Plan	Smoke/No Smoke Plan
Reduced Monitoring Frequency	If 60 minutes of observations were not necessary under the Initial Monitoring Frequency, or the source was observed for 60 minutes and no more than eight individual 15-second readings are greater than 20% opacity during the most recent observation, then reduce the number of six-minute observations to one observation for every quarter (no reduction for pipeline quality natural gas fired sources) that a source operates.	If the source operated without visible smoke in the exhaust during the most recent month, then reduce the number of Smoke/No-Smoke observations to one observation for every month (no reduction for pipeline quality natural gas fired sources) that a source operates.
Increased Monitoring Frequency	If a source is observed for 60 minutes and more than eight, but fewer than thirteen individual 15-second readings are greater than 20% opacity during the most recent observation, then increase the observation frequency to or maintain at monthly intervals, until the criterion for reduced monitoring frequency specified above are met.	No increased frequency. Go to condition 73 or to the Initial Monitoring Frequency of the Method-9 Plan.

[18AAC50.350(g)-(i), 1/18/97]

72. The Permittee is not required to comply with conditions 45, 46 and 47 (Test Plans, Test Notifications and Test Reports) when the exhaust is observed for visible emissions under condition 71.

[18AAC50.350(g)-(i), 1/18/97]

Corrective Actions Based on Visible Emissions Observations

73. If under the Smoke/No Smoke Plan visible emissions are present in the exhaust during an observation performed under condition 71, then the Permittee shall
- 73.1 Initiate actions to eliminate smoke from the source within 24 hours of the observation;
 - 73.2 Keep a written record of the starting date, the completion date, and a description of the actions taken to reduce smoke;
 - 73.3 After completing the actions, then take smoke/no-smoke readings in accordance with condition 71 at a frequency of at least once per day for the next 30 calendar days (for both liquid and gas fired sources) that the source operates, and continue according to the Smoke/No Smoke Plan set out in condition 71; and

- 73.4 If the actions taken under condition 73.1 do not eliminate the smoke, or if subsequent smoke is observed under the schedule set out in condition 73.3, then observe the exhaust in accordance with the Method-9 Plan until written approval has been received from the department to resume observations under the Smoke/No-Smoke Plan.

[18AAC50.350(g)-(i), 1/18/97]

Particulate Matter Testing (Source IDs 1–3)

- 74.** The Permittee shall conduct source tests to determine the concentration of particulate matter (PM) in the exhaust of a source as follows:

- 74.1 Conduct a particulate matter source test according to the requirements set out in Section 9 no later than 90 calendar days after any time either of the following occurs, (unless a follow-up Method-9 test during the 90 days shows that the following no longer occurs)::

- a. a 60-minute Method -9 reading results in 13 or more 15-second readings with an opacity greater than 20%; or
- b. a 60-minute Method-9 reading results in an average opacity that is greater than 12% for a source with an exhaust stack diameter that is less than 21 inches.

- 74.2 During each PM source test, observe the exhaust for 60 minutes in accordance with Section 14 and submit a summary of these observations with the source test report.

[18AAC50.350(g)-(i), 1/18/97]

Reporting Requirements

- 75.** The Permittee shall, within 180 calendar days after the effective date of this permit, record and report the exhaust stack diameter of each Source IDs 1-3 and report this information to the department with the first or second facility operating report required by condition 55.

[18AAC50.350(g)-(i), 1/18/97]

- 76.** The Permittee shall notify the department in each facility operating report required by condition 55 which visible-emission plan in condition 71 was used for each source. The Permittee shall also submit with the facility operating report copies of the observation results (i.e. opacity readings) for each source that used the Method-9 Plan. The Permittee shall also indicate in the facility operating report the number of calendar days that smoke was observed for each source that used the Smoke/No-Smoke.

[18AAC50.350(g)-(i), 1/18/97]

- 77.** Report under condition 53 if:

- 77.1 a 60 minute visible emission observation results in

- a. 13 or more 15-seconds readings with an opacity greater than 20%;
- b. a 60-minute average opacity that is greater than 12% for a source with an exhaust stack diameter that is less than 21 inches; or

77.2 the results of a test for particulate matter exceed the particulate matter emission limit.

[18 AAC 50.350(g) – (i), 1/18/97]

Section 14. Visible Emission Evaluation Procedures

An observer qualified according to 40 C.F.R. 60, RM 9 shall use the following procedures to determine the reduction of visibility through the exhaust effluent.

Position. The qualified observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented in the 140° sector to his back. Consistent with maintaining the above requirement, the observer shall to the extent possible, make his observations from a position such that his line of vision is approximately perpendicular to the plume direction and, when observing opacity of emissions from rectangular outlets (e.g., roof monitors, open baghouses, noncircular stacks), approximately perpendicular to the longer axis of the outlet. The observer's line of sight should not include more than one plume at a time when multiple stacks are involved, and in any case the observer should make his observations with his line of sight perpendicular to the longer axis of such a set of multiple stacks (e.g., stub stacks on baghouses).

Field Records. The observer shall record the name of the plant, emission location, facility type, observer's name and affiliation, and the date on the Visible Emissions Field Data Sheet. The time, estimated distance to the emission location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), and plume background are recorded on the sheet at the time opacity readings are initiated and completed.

Observations. Opacity observations shall be made at the point of greatest opacity in that portion of the plume where condensed water vapor is not present. The observer shall not look continuously at the plume but instead shall observe the plume momentarily at 15-second intervals. Unless directed to do otherwise in this permit, observe emissions for 60 consecutive minutes to obtain a minimum of 240 observations.

Attached Steam Plumes. When condensed water vapor is present within the plume as it emerges from the emission outlet, opacity observations shall be made beyond the point in the plume at which condensed water vapor is no longer visible. The observer shall record the approximate distance from the emission outlet to the point in the plume at which the observations are made.

Detached Steam Plume. When water vapor in the plume condenses and becomes visible at a distinct distance from the emission outlet, the opacity of emissions should be evaluated at the emission outlet prior to the condensation of water vapor and the formation of the steam plume.

Recording Observations. Opacity observations shall be recorded to the nearest 5 percent at 15-second intervals on the Visible Emissions Observation Record contained in this section. Record the minimum number of observations required by the permit. Each momentary observation recorded shall be deemed to represent the average opacity of emissions for a 15-second period.

Data Reduction. To determine compliance with a standard set out in conditions 3 and 27, count the number of observations that exceed 20 percent opacity and record this number on the sheet.

Visible Emissions Field Data Sheet

Certified Observer: _____

Company: _____

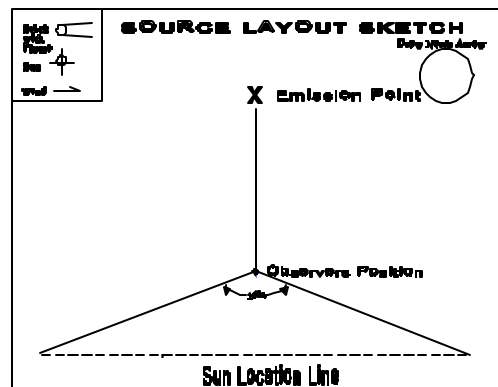
Location: _____

Test No.: _____ Date: _____

Source: _____

Production Rate, Operating Rate &
Unit Operating Hours: _____

Hrs. of observation: _____



Clock Time	Initial				Final
Observer location					
Distance to discharge					
Direction from discharge					
Height of observer point					
Background description					
Weather conditions					
Wind Direction					
Wind speed					
Ambient Temperature					
Relative humidity					
Sky conditions: (clear, overcast, % clouds, etc.)					
Plume description:					
Color					
Distance visible					
Water droplet plume? (Attached or detached?)					
Other information					

Visible Emissions Observation Record

Page ____ of ____

Company _____ Certified Observer _____

Test Number _____ Clock time _____

[illegible]

Additional information:

Observer Signature

Data Reduction:

Duration of Observation Period (minutes) _____

Number of Observations _____

Number of Observations exceeding 20% _____

Average Opacity Summary

Set Number	Time Start—End	Opacity	
		Sum	Average

Section 15. Material Balance Calculation

If the sulfur content of a fuel shipment is greater than 0.5% by weight, calculate the three-hour exhaust concentration of SO₂ using the following equations:

$$A = 31,200 \times [\text{wt}\%S_{\text{fuel}}] = 31,200 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$B = 0.148 \times [\text{wt}\%S_{\text{fuel}}] = 0.148 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$C = 0.396 \times [\text{wt}\%C_{\text{fuel}}] = 0.396 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$D = 0.933 \times [\text{wt}\%H_{\text{fuel}}] = 0.933 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$E = B + C + D = \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$F = 21 - [\text{vol}\%_{\text{dry}}O_{2,\text{exhaust}}] = 21 - \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$G = [\text{vol}\%_{\text{dry}}O_{2,\text{exhaust}}] \div F = \underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$H = 1 + G = 1 + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$I = E \times H = \underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$\text{SO}_2 \text{ concentration} = A \div I = \underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \text{ PPM}$$

The **wt%*S*_{fuel}**, **wt%*C*_{fuel}**, and **wt%*H*_{fuel}** are equal to the weight percents of sulfur, carbon, and hydrogen in the fuel. These percentages should total 100%.

The fuel weight percent (wt%) of sulfur is obtained pursuant to condition 5.1b. The fuel weight percents of carbon and hydrogen are obtained from the fuel refiner.

The volume percent of oxygen in the exhaust (**vol%*O*_{2,exhaust}**) is obtained from oxygen meters, manufacturer's data, or from the most recent ORSAT analysis at the same engine load used in the calculation.

Enter all of the data in percentages without dividing the percentages by 100. For example, if **wt%*S*_{fuel}** = 1.0%, then enter 1.0 into the equations not 0.01 and if **vol%*O*_{2,exhaust}** = 3.00%, then enter 3.00, not 0.03.

[18 AAC 50.350(g), 1/18/97]

Section 16. ADEC Notification Form

Fax this form to: (907) 269-7508 Telephone: (907) 269-8888

Kodiak Electric Association, Inc.

Company Name

Nyman Power Plant

Facility Name

1. Reason for notification:☐ **Excess Emission**☐ **Permit Condition Deviation****2. Event Information (Use 24-hour clock):****START Time:****END Time:****Duration**

(hr:min):

Date: _____ : _____ : _____

Date: _____ : _____ : _____

Total: _____ : _____**3. Cause of Event (Check all that apply):**☐ **START UP**☐ **UPSET CONDITION**☐ **CONTROL EQUIPMENT**☐ **SHUT DOWN**☐ **SCHEDULED MAINTENANCE**☐ **OTHER** _____*Attach a detailed description of what happened, including the parameters or operating conditions exceeded.***4. Sources Involved:***Identify each Emission Source involved in the event, using the same identification number and name as in the Permit. List any Control Device or Monitoring System affected by the event.**Attach additional sheets as necessary.*

Source ID No. Source Name Description Control Device

_____**5. Emission Limit Exceeded and/or Permit Condition Deviation:***Identify each Emission Standard and Permit Condition potentially exceeded during the event. Attach a list of ALL known or suspected injuries or health impacts. Attach additional sheets as necessary.*

Permit Condition Limit Exceedance

_____**6. Emission/Deviation Reduction:***Attach a description of the measures taken to minimize and/or control emissions or permit condition deviations during the event.***7. Corrective Actions:***Attach a description of corrective actions taken to restore the system to normal operation and to minimize or eliminate chances of a recurrence.*

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.

Printed Name: _____

Signature: _____

Date: _____

Alaska Department of Environmental Conservation

Air Permits Program

Administrative Revision: September 26, 2002

Kodiak Electric Association

Nyman Power Plant

LEGAL AND FACTUAL BASIS

of the terms and conditions for

Permit No. 180TVP01

Prepared by Scott Bailey

INTRODUCTION

This document sets forth the legal and factual basis for the terms and conditions of Operating Permit No. 180TVP01.

The Nyman Power Plant is an electric generating facility that provides power to the Kodiak power system. The facility is owned and operated by Kodiak Electric Association, Inc. Kodiak Electric Association, Inc. is the Permittee for the facility's operating permit.

PROCESS DESCRIPTION

As provided in the amended application, the facility contains a diesel electric generator and a new (1999) liquid fueled turbine with an auxiliary 250 kW startup generator. Both the diesel electric generator and the liquid fueled turbine generate power for the Kodiak Island electric grid. The sources at the facility regulated in Operating Permit 180TVP01 are identified in Table 1 in Section 4 of the permit.

SOURCE INVENTORY AND DESCRIPTION

Section 4 of Operating Permit No. 180TVP01 contains Table 1 describing the sources regulated by the permit. The table is provided for information and identification purposes only. Specifically, the source rating/size provided in the table is not intended to create an enforceable limit.

EMISSIONS

Table 1. Emissions Summary

Pollutant	NO _x	CO	PM-10	SO ₂	VOC
Assessable Potential to Emit (TPY) under condition 1.1.	249	19	0	160	11

The Potential Emissions were calculated based on manufacturer's emission data and AP-42 emission factors and are from the Technical Analysis Report of Construction Permit 0025 AC026. The facility has a fuel restriction in order to limit NO_x emissions.

The assessable potential to emit is simply those regulated air contaminants for which the facility has the potential to emit quantities greater than 10 tons per year. KEA submitted assessable potential to emit calculations on August 30, 2000. BACT emissions allowable for Source ID 1 are 132 tpy of CO and 318 tpy of NO_x.

BASIS FOR REQUIRING AN OPERATING PERMIT

The Nyman Power Plant requires an operating permit because it has the potential to emit 100 tons per year (tpy) or more of a regulated air contaminant. The Nyman Power Plant meets the definition of operating permit facility in the state regulations at Section 2.

The power plant was built before August 7, 1980 but after the Prevention of Significant Deterioration (PSD) regulations of August 7, 1977. At that time there was no state delegation of the Federal PSD program under 40 C. F. R. 52.21. The facility was constructed under the authority of the U.S. Environmental Protection Agency (Authority to Construct No. PSD X79 10). The Best Available Control Technology Limits (BACT) for Source ID 1 were inadvertently not carried over into state operating permit 9021-AA006. The department approved transfer of air quality control obligations of the power plant from the U. S. Coast Guard to KEA on January 17, 1997.

Alaska regulations require operating permit applications to include identification of “regulated sources.” As applied to Nyman Power Plant, the state regulations require a description of:

Each incinerator, including a demonstration showing each requirement in 18 AAC 50.050, Incinerator Emissions Standards, that applies [18 AAC 50.335(e)(4)(A)];

Each source regulated by a standard in 18 AAC 50.055, Industrial Processes and Fuel Burning Equipment [18 AAC 50.335(e)(4)(C)];

Each source subject to a standard adopted by reference in 18 AAC 50.040 [18 AAC 50.335(e)(2)]; and

Sources subject to requirements in an existing DEC permit [18 AAC 50.335(e)(5)]

The emission sources at Nyman Power Plant classified as “regulated sources” according to the above DEC regulations are listed in Table 1 of Permit No. 180TVP01.

CURRENT AIR QUALITY PERMITS

Previous Air Quality Permit to Operate

The most recent operating permit issued for this facility is Air Quality Permit No. 9625-AA011 issued before January 18, 1997. On January 17, 1997 the U. S. Coast Guard (USCG) ISC Kodiak command transferred, with department approval, the operation of the ISC Nyman facility to the Kodiak Electric Association.

Construction Permits

Construction Permit Numbers 9825-AC003 and 0025-AC026 were issued to this facility on April 15, 1998 and January 8, 2001 respectively. The facility-specific requirements established in the current construction permit are included in the new operating permit as described below.

Title-V Operating Permit Application History

The owner or operator submitted an application on November 25, 1997.

The owner or operator amended the operating permit application on November 8, 2000.

COMPLIANCE HISTORY

The facility has operated at its current location since 1978. Review of the permit files for this facility, which includes the past inspection reports indicate a facility generally operating in compliance with its operating permit.

Source testing was conducted May 3-4, 2000 on Source IDs 1 & 2. For Source ID 1 the NO_x and CO emission rates were respectively 80% and 9.6% of the BACT limits in condition 6. For Source ID 2 the SO₂ emission rate was 40.7% of the NSPS limits in condition 17. The NO_x emission rate was 77% of the PSD limit in condition 24.

FACILITY-SPECIFIC REQUIREMENTS CARRIED FORWARD

18 AAC 50.350(d)(1)(D) requires that this permit include each facility specific requirement established in prior permit 9625-AA011. Table 2 below lists the old requirement (condition) and the new condition that carries over the old requirement into the new permit.

Table 2. A comparison of pre-January 18, 1997 Air Quality Permit No. 9625-AA011 facility-specific conditions to Permit No. 180TVP01 conditions. This table does not include standard and general conditions.

Permit No. 9625-AA011 condition	Description of Requirement	Permit No. 180TVP01 condition	How condition was revised
Introductory paragraph and Exhibit A	Authority for permit and source list	Section 2 and Table 1	Same information, different format
1	comply with ambient air quality standards	N/A	Now required only for construction permits.
2 and Exhibit B	comply with most stringent emission standards, limits, specifications(SLS)	Section 5	SLS are now in several conditions. Exhibit B rescinded in Const. Permit 0025-AC026
3	operate and maintain equipment to minimize emissions during startup and shutdown	None	Replaced by condition 11 for NSPS sources and condition 33 for all other sources.
4	No modifications which might result in an increase in PTE without 30 day advance notification	None	Removed state only requirement. NSPS sources subject to condition 13.
5	Previous power generation limit owner requested on Source ID 1	None	Rescinded in Const. Permit 0025-AC026, replaced by a fuel limit on Source IDs 1-3, condition 22.1
6	Fuel sulfur limit \leq 0.5 %	5.1a	Same requirement, changed wording
7	Source testing requirement	41	Same requirement, changed wording
8	Source test rate & Ref. Methods	42 & 43	Same requirement, changed wording
9	Submit source test	45	Same requirement, changed

Permit No. 9625-AA011 condition	Description of Requirement	Permit No. 180TVP01 condition	How condition was revised
	plans within 30 & 60 day windows specified prior to testing		wording
10	Written notification 10 days prior to testing	46	Same requirement, changed wording
11	Submit source test results	47	Same requirement, changed wording
12	Maintain and record fuel flow w/a continuous system	22.2, 22.3, 23	Same requirement, changed wording
13	Sample & analyze diesel fuel per Exhibit C, copy to DEC	5.1	Same requirement, changed wording
14	Install, operate & maintain a recording kW-hr meter for power generation per Exhibit C	Modified per 25.2	Req'd for PSD avoidance in Const. Permit 0025-AC026
15	Notify the dept. within 24 hours- fax or phone- of any excess emissions	53	Same requirement, changed wording
16	Submit written excess emissions report within 5 days unless notified per 15	53	Changed to report within 48 hours
17	Access to the facility	64	Same requirement, changed wording
18	Submit semi-annual Facility Operating Reports Jan. 30 & July 30	55	Same requirement, changed wording

Permit No. 9625-AA011 condition	Description of Requirement	Permit No. 180TVP01 condition	How condition was revised
19	Notify dept. when power production reaches 19,763,656 kWh	None	Rescinded in Const. Permit 0025-AC026, replaced by a fuel limit on Source IDs 1-3, condition 22.1
20	Maintain records	52	Same requirement, changed wording
21	Notify dept. 30 days prior to any change that would result in an increase in air emissions	None	Removed. State-only reporting for condition 4 of Permit 9625-AA011. NSPS sources subject to condition 13.
22	Display permit in control room & keep on file	65	Required by Const. Permit 0025-AC026 to keep a copy at the facility of the permit, State Air Quality Regulations 18 AAC 50 and Alaska Statutes 46.14.

Table 3. A comparison of Permit No. 0025-AC026 facility-specific conditions to Permit No. 180TVP01 conditions. This table does not include standard and general conditions.

Permit No. 0025-AC026 condition	Description of Requirement	Permit No. 180TVP01 condition	How condition was revised
I-A	Rescind Const. Pmt. 9825-AC003	None	Const. Permit 9825-AC003 never incorporated into draft Operating Permit
I-B	Comply with 9625-AA011 until Title V permit issued	None	
I-C	Rescind Exhibit B & Cond. B-5 of 9625-AA011	None	Conditions rescinded in Const. Permit 0025-AC026 and do not require actions by the Permittee.
I-D	If conflict of terms/cond. in 9625 AA011 w Permit 0025-AC026, comply w Permit 0025-AC026	None	Not carried, Title V Operating Permit replaces 9625-AA011
III-I	Keep a copy of this permit, 18 AAC 50, and AS 46.14 at the permitted facility	65	Added condition 67
IV-A	Do not exceed AAQS Std. In 18 AAC 50.010 or the PSD increments in 18 AAC 50.020	3, 4, 5, and Section 6	Same requirements, different format
IV-B	Monitor and record fuel sulfur certs. and date, time, duration and reason for operating Source 3.	5.1f, 7	Added condition 5
IV-C1	Report fuel sulfur content in the Semi-annual Facility Operating Reports	5.1f	
IV-C2	Report within 30 days the date stack construction for Sources 1 and 2 is complete	None	Not carried, tasks completed 1/7/2000
V-A	Authorize operation of Sources 1–3	Table 1	Same requirement, different format
V-B	Develop and maintain an O&M manual for Sources 1–3, keep readily accessible and operate for optimum control of emissions during all periods	8	Same requirement, different format

Permit No. 0025-AC026 condition	Description of Requirement	Permit No. 180TVP01 condition	How condition was revised
V-C	Record dates of construction start, halts and complete for installing Source 2	None	Not carried, task completed 6/12/2000
VI A-C	Owner Requested Limits for PSD Avoidance		
VI-A	Avoid PSD classification	22	Carried
VI-B	M&R using fuel meter or fuel tank level, NO _x emissions for Source 1 per VII(B)&(C) and Source 2 per VIII(C4)&(C5)	22, 23, 24	Carried
VI-C	Report in Semi-annual Facility Operating Report monthly fuel consumption in each source, power generated each unit each month, fuel meter certification if applicable and any excess fuel consumption in Source 1	22, 23, 24	Source 1 & 2 NO _x source testing not carried, task completed May
		25	Carried
VII A-C	BACT Limits for Source #1		
VII-A	Limit NO _x to 113.5 lb/hr & 318 tpy and CO to 30.5 lb/hr & 132 tpy	6	Carried
VII-B	Conduct emission test on Source 1 @ 95% of base load rating within 60 days max production rate on Source 2, but no later than 180 days after Source 2 initial start-up	None	Not carried, task complete 5/4/00
VII-C	Report emission test results per III-D	None	Not carried, task complete 6/12/00
VIII-2	Submit copies of all NSPS and NESHAP reports made to EPA Region 10 to DEC	54.1	Carried
VIII-3	Notify DEC of any EPA waiver to any NSPS or NESHAP emission standards	54.2	Carried
VIII-A	40 CFR 60 Subpart A applies to NSPS Source ID 2 (except to exempted VOL storage Tanks Subpart Kb) and requires submitting all information under 40 CFR 60.6-60.8, 60.11-13, 60.14-19, 40 CFR 61.07 and 61.09-61.14	9-14	Carried
VIII-B	40 CFR 60, Subpart Kb applies to Sources 5-6. Complete required recordkeeping	14	Carried

Permit No. 0025-AC026 condition	Description of Requirement	Permit No. 180TVP01 condition	How condition was revised
VIII-C	40 CFR 60, Subpart GG applies to Source 2. Complete required monitoring, record keeping, reporting	15–21	Carried
IX-A	Comply with 18 AA 50.055(a)(1) and 18 AAC 50.055(b)(1) for Sources 1-3	3 and 4	Carried
IX-B	Comply with 18 AA 50.055 to maintain sulfur dioxide concentrations no greater than 500 ppm average over 3 hour from Sources 1-3	5	Carried
IX-C	M & R visible emissions once calendar year, conduct emission test on Source 1 within 60 days max production rate Source 2, but no later than 180 days after Source 2 initial start-up	None	Not carried, task completed 5/4/00 and more stringent visible emission MR & R required in Title V Operating Permit.
IX-D	Report particulate source test results from IX-C per III-D	None	Not carried, task completed 6/12/00
X	Comply with 18 AAC 50.110 by taking action on air pollution complaints, operating equipment to provide balanced control of air contaminant emissions during all operating periods and logging all complaints	37, 42	Same requirements, different format

LEGAL AND FACTUAL BASIS FOR THE PERMIT CONDITIONS

Conditions 1 - 2

Legal Basis: [18 AAC 50.350(c) & 18 AAC 50.400 – 420, 1/18/97]

The regulations require all permits to include due dates for the payment of fees and any method the Permittee may use to re-compute assessable emissions.

Factual Basis: These conditions require the Permittee to pay fees in accordance with the department's billing regulations. The department's billing regulations set the due dates for payment of fees based on the billing date.

The conditions also set forth how the Permittee may recompute assessable emissions. If the Permittee does not choose to annually calculate assessable emissions, emissions fees may be paid based on “potential to emit.”

The potential to emit for sulfur dioxide is based upon a 0.5% fuel sulfur limit as allowed in the permit.

Condition 3

Legal Basis: [18 AAC 50.055(a)(1), 1/18/97]

[18 AAC 50.350(d)(1)(C), 6/21/98]

[18 AAC 50.350(g) – (i), 1/18/97]

Heaters (including boilers), flares and engines (including diesel engines and gas turbines) are fuel-burning equipment. This regulation applies to operation of all fuel-burning equipment in Alaska.

Factual basis: The condition cites the state visible emission standard applicable to fuel-burning equipment. The Permittee shall not cause or allow the heaters, flares and engines to violate this standard.

The monitoring, recordkeeping, and reporting requirements are listed in Section 13 of the permit. The requirements for the visible emission and particulate matter standards are combined in this section.

There are two options for monitoring visible emissions. One option requires the Permittee to observe visible emissions in accordance with the state reference test method (i.e. 40 CFR 60, Method-9). The other option requires the Permittee to momentarily observe the exhaust for presence or absence of smoke. This latter option takes into account the difficulty and expense of getting certified readers to remote locations in Alaska.

Under the latter option, all sources are initially observed for the presence or absence of smoke in the exhaust for each of the first 30 operating days (every calendar week for natural gas, except for flares). Smoke is presumed to be absent if the exhaust exhibits less than about five percent opacity. The department believes the initial 30 days (20 weeks for natural gas, except for flares) is sufficient to capture all operating modes and to assure that the monitoring determines if the source complies with the visible emission standard. If smoke is absent during any 30 day operating period (20 operating weeks for natural gas, except for

flares), then the monitoring frequency is relaxed to one observation for every 30 days (20 weeks for natural gas, except for flares) that a source operates. The department believes checks every 20 weeks for natural gas fired sources, except for flares, are sufficient to monitor for the presence of increased visible emissions that may result from startup, shutdown or degradation of a source. For other sources the department believes monthly checks are sufficient to monitor for the presence of increased visible emissions that may result from degradation.

EPA, in its Region 7 Policy on Periodic Monitoring for Opacity, indicated that little or no opacity problems are expected with the use of natural gas fuel and that opacity might be high during startup, shutdown, or malfunction. Therefore, the department has lessened the frequency of opacity readings for natural gas fueled equipment. The department has also specified a preference that concentrated the readings to startup and shutdown periods.

If the Permittee observes smoke in the exhaust, the Permittee must take action to eliminate visible emissions from the source within 24 hours of the observation. After completing the action, the Permittee continues to observe the exhaust for the presence or absence of smoke for 30 operating days. If smoke is observed during this 30-day period, the Permittee must observe visible emissions using the state reference test method within seven days after the visible emissions are observed.

The recordkeeping requirements consist of keeping records of the results of all visible emission observations and records of any actions taken to reduce visible emissions. The Permittee must report copies of the results of all observations done using the state reference test method with the facility operating reports. The Permittee must report emissions in excess of the state visible emission standard and deviations from permit conditions.

Condition 4

Legal Basis: [18 AAC 50.055(b)(1), 1/18/97]
[18 AAC 50.350(d)(1)(C), 6/21/98]
[18 AAC 50.350(g) – (i), 1/18/97]

Heaters (including boilers), flares and engines (including diesel engines and gas turbines) are fuel-burning equipment. This regulation applies to operation of all fuel-burning equipment in the State of Alaska.

Factual basis: The condition cites the state particulate-matter emission standard applicable to fuel-burning equipment. The Permittee shall not cause or allow heaters, flares or engines to violate this standard.

The monitoring, recordkeeping, and reporting requirements are listed in Section 13 of the permit. The requirements for the visible emission and particulate matter standards are combined in this section.

The requirement to test for particulate matter to determine compliance with the standard is triggered by the results of observations conducted in accordance with the state reference test method. For most sources the Permittee is required to conduct tests if the results of an observation show noncompliance with the visible emission standard or the average opacity indicates noncompliance with the particulate matter standard.

The department is not requiring initial tests to show compliance with the particulate matter standards. Based on manufacturers' data, the department believes that most new heaters, flares, and engines comply with the particulate matter standard¹. Also, there are opacity-particulate correlations² that show emissions from heaters and engines commonly used in Alaska will meet the state particulate matter (PM) standard of 0.05 grains per dry standard cubic foot (gr./dscf) of exhaust gas, if the average opacity in the exhaust is less than 20 percent and the exhaust stack diameter is at least 21 inches. The correlations also show that emissions from heaters and engines commonly used in Alaska with an exhaust stack diameter of at least 10 inches will always meet the 0.05 gr./dscf PM standard if the average opacity is less than 12%. None of the permitted exhaust stacks in Alaska should have exhaust stack diameters less than 10 inches; if they did, then the 12% (PM source test trigger) should be decreased to account for the smallest stack diameter. The department believes this is sufficient justification to not require initial compliance testing since the Permittee certified compliance with the visible emission standard in the application. However, the department is requiring testing if the Permittee observes visible emissions, that are not corrected, greater than the state PM standard or greater than 12% for exhaust stacks smaller than 21 inches.

In a general operating permit for engines, the department required source tests for particulate matter when the average opacity of a visible emission observation exceeded twelve percent. Since that time, the department has uncovered additional test data and literature that supports a statement that heaters and flares will meet the 0.05 grain loading standard when the average opacity is less than twelve percent, provided that the exhaust outlet diameter (path length for opacity observations) exceeds 21 inches. Testing conducted at both an Alaskan power plant and an Hawaiian utility confirm that compliance with the 20 percent opacity standard will insure compliance with the 0.05 gr./dscf particulate standard, provided that the exhaust outlet is 21 inches or larger. This test data closely agrees with values obtained using the smoke density calculator at <http://www.dieselnet.com/calculator/index.html>. The calculator is based on the report, *Particulate Matter Measurements*, DieselNet Technology Guide, Revision 1997.12. Based on this new information, the department is requiring testing if the Permittee observes visible emissions greater than 12%, expressed as a 60-minute average and the stack diameter if the source is less than 21 inches. The department is also requiring the Permittee to measure visible emissions during a source test and to calculate the average opacity during the test.

The Permittee must report copies of all source test reports and emissions in excess of the particulate matter standard.

¹ See attached data

² See attached graph

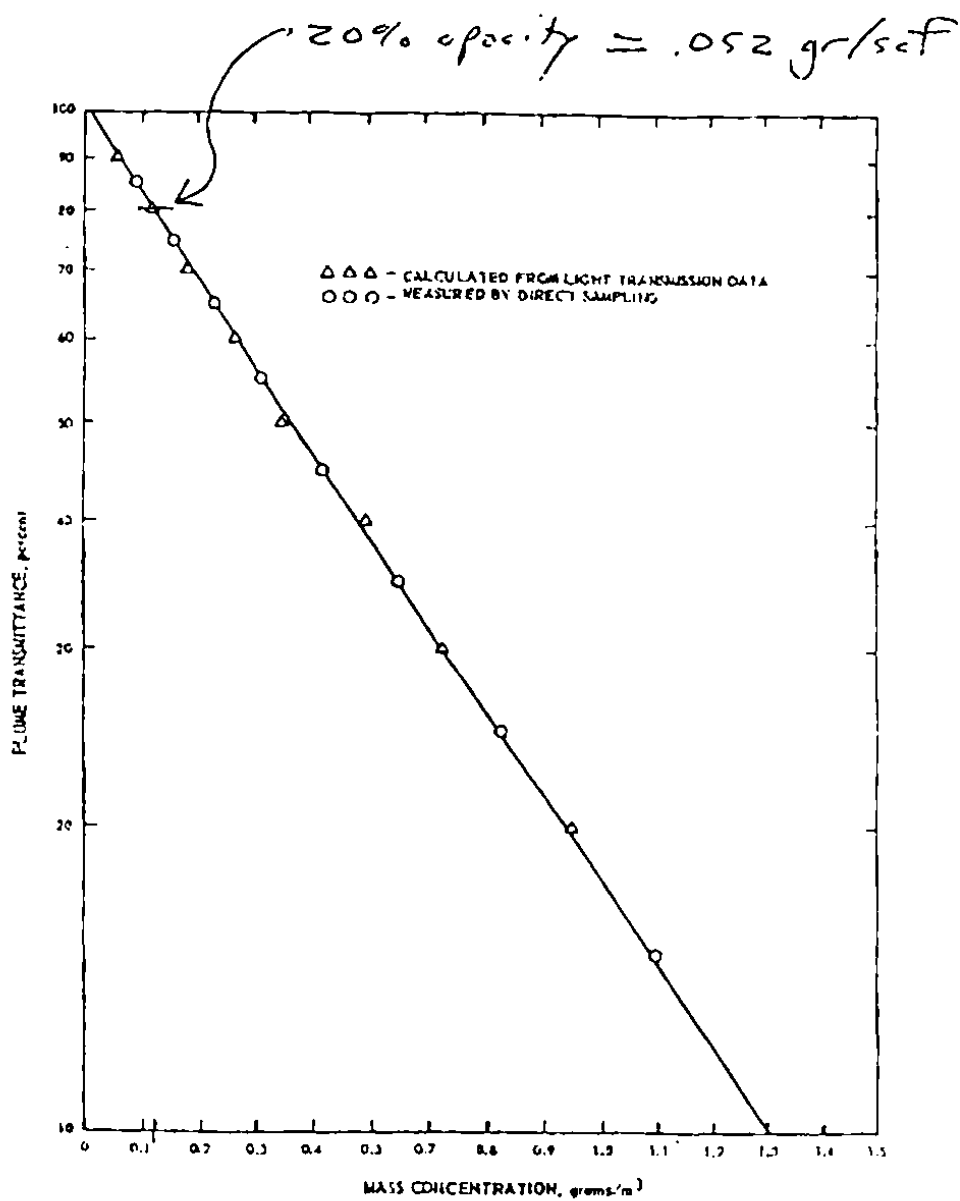


Figure 32. Mass concentration of black plume as calculated from transmittance and measured by direct sampling.

OPTICAL PROPERTIES AND VISUAL EFFECTS

			Capacity kW	Test Capacity kW	Capacity bhp	disc	asfm	% modulus	Fahrenheit Gas Temp.	%O2	gm/kwh	g/sec
FO2 0.2% S CAT	D398 JYAC	rpm	not eval.	not eval.	839	1969	5239	not eval.	890		0.09 n/a	0.008 From vendor
FO2 0.2% S CAT	3412 DITA		390	360	483	930	2161	not eval.	1203 n/a		0.08 n/a	0.008 From vendor
FO2 0.2% S CAT	3516		1135	1135	1586	3261	9189	not eval.	817 n/a		0.24 n/a	0.021 From vendor
FO2 0.2% S CAT	3512		855	855	1205.7	2114	6003	not eval.	622 n/a		0.165 n/a	0.017 From vendor
FO 18.2 CAT	3516		1450	1200	n/a	3941.3	11228.4	6.82	874.6	10.5	n/a	0.001 METHOD 5
FO 18.2 CAT	3516		1450	1200	n/a	3927.5	11170.1	6.69	875.5	10.5	n/a	0.028 METHOD 5
FO 18.2 CAT	3518		1450	1200	n/a	3869.8	10963.3	6.84	877.7	10.3	n/a	0.030 METHOD 5
FO 18.2 CAT	3606	900	1730	2300	2320	4644	13002	not eval.	817	15	0.15 n/a	0.012 From vendor
FO2 0.2% S CAT	3606	900	2300	2300	3084	5990	16744	not eval.	811	15	0.29 n/a	0.023 From vendor
FO2 0.2% S CAT	3606	900	2460	2460	3299	6896	19282	not eval.	795	15	0.24 n/a	0.018 From vendor
FO2 0.2% S CAT	3606	900	3460	3460	4640	8296	26005	not eval.	817	15	0.15 n/a	0.012 From vendor
FO2 0.2% S CAT	3812	900	3700	3700	4962	10143	28399	not eval.	836	15	0.28 n/a	0.029 From vendor
FO2 0.2% S CAT	3618	900	4600	4600	6159	11960	33469	not eval.	811	15	0.39 n/a	0.029 From vendor
FO2 0.2% S CAT	3618	1000	4820	4920	6598	13774	38566	not eval.	795	15	0.24 n/a	0.01862 From vendor
FO2 0.2% S CAT	3618	1000	-600	-600	800	1548	3232	7.7	548	13.2 n/a	n/a	0.00662 METHOD 5
FO2 0.2% S CAT	3618	1000	-600	-600	800	1548	3232	7.7	548	13.2 n/a	n/a	0.00615 METHOD 5
FO2 0.2% S CAT	3618	1000	-600	-600	800	1548	3232	7.7	548	13.2 n/a	n/a	0.013 METHOD 5
FO2 0.2% S CAT	3618	1000	-600	-600	800	1548	3232	7.7	548	13.2 n/a	n/a	0.019 METHOD 5
FO2 0.2% S CAT	3618	1000	-600	-600	800	1548	3232	7.7	548	13.2 n/a	n/a	0.020 METHOD 5
FO2 0.2% S CAT	3618	1000	-600	-600	800	1548	3232	7.7	548	13.2 n/a	n/a	0.018 METHOD 5
FO2 0.2% S CAT	3618	1000	-600	-600	800	1548	3232	7.7	548	13.2 n/a	n/a	0.025 METHOD 5
FO2 0.2% S CAT	3618	1000	-600	-600	800	1548	3232	7.7	548	13.2 n/a	n/a	0.022 METHOD 5
FO2 0.2% S CAT	3618	1000	-600	-600	800	1548	3232	7.7	548	13.2 n/a	n/a	0.021 METHOD 5
FO 18.2	12RKC	rpm	2200	1850	2500	6497.5	18632.0	6.43	760.4	11.0 n/a	n/a	0.022 METHOD 5
FO 18.2	12RKC	rpm	2200	1850	2500	6497.5	18632.0	6.43	760.4	11.0 n/a	n/a	0.021 METHOD 5
FO 18.2	12RKC	rpm	2200	1850	2500	6497.5	18632.0	6.43	760.4	11.0 n/a	n/a	0.021 METHOD 5
FO2 0.2% S CAT	3116DITA A	2400	201.15	not eval.	150	not eval.	not eval.	not eval.	not eval.	5	0.22	0.022 From vendor
FO2 0.2% S CAT	3116DITA A	2400	254.79	not eval.	190	not eval.	not eval.	not eval.	not eval.	5	0.23	0.038 From vendor
FO2 0.2% S CAT	3116DITA B	2400	268.2	not eval.	200	not eval.	not eval.	not eval.	not eval.	5	0.23	0.037 From vendor
FO2 0.2% S CAT	3116DITA C	2400	221.265	not eval.	165	not eval.	not eval.	not eval.	not eval.	5	0.22	0.028 From vendor
FO2 0.2% S CAT	3116DITA C	2300	268.2	not eval.	200	not eval.	not eval.	not eval.	not eval.	5	0.23	0.030 From vendor
FO2 0.2% S CAT	3116DITA C	2200	261.495	not eval.	195	not eval.	not eval.	not eval.	not eval.	5	0.16	0.028 From vendor
FO2 0.2% S CAT	3116DITA C	2100	248.085	not eval.	185	not eval.	not eval.	not eval.	not eval.	5	0.15	0.026 From vendor
FO2 0.2% S CAT	3116DITA C	2000	241.38	not eval.	180	not eval.	not eval.	not eval.	not eval.	5	0.15	0.026 From vendor
FO2 0.2% S CAT	3116DITA C	2000	241.38	not eval.	180	not eval.	not eval.	not eval.	not eval.	5	0.32	0.037 From vendor
FO2 0.2% S CAT	3116DITA C	2300	241.38	not eval.	175	not eval.	not eval.	not eval.	not eval.	5	0.23	0.038 From vendor
FO2 0.2% S CAT	3116DITA C	2200	234.675	not eval.	160	not eval.	not eval.	not eval.	not eval.	5	0.26	0.038 From vendor
FO2 0.2% S CAT	3116DITA C	2200	214.56	not eval.	150	not eval.	not eval.	not eval.	not eval.	5	0.27	0.044 From vendor
FO2 0.2% S CAT	3116DITA C	2100	201.15	not eval.	145	not eval.	not eval.	not eval.	not eval.	5	0.29	0.052 From vendor
FO2 0.2% S CAT	3116DITA C	2000	194.445	not eval.	150	not eval.	not eval.	not eval.	not eval.	5	0.30	0.057 From vendor
FO2 0.2% S CAT	3116DITA C	1950	201.15	not eval.	180	not eval.	not eval.	not eval.	not eval.	5	0.23	0.014 From vendor
FO2 0.2% S CAT	3116DITA C	1800	241.38	not eval.	180	not eval.	not eval.	not eval.	not eval.	5	0.23	0.025 From vendor
FO2 0.2% S CAT	3116DIT A	2400	187.74	not eval.	140	not eval.	not eval.	not eval.	not eval.	5	0.22	0.031 From vendor
FO2 0.2% S CAT	3116DIT B	2400	201.15	not eval.	150	not eval.	not eval.	not eval.	not eval.	5	0.23	0.034 From vendor
FO2 0.2% S CAT	3116DIT C	2400	207.855	not eval.	155	not eval.	not eval.	not eval.	not eval.	5	0.24	0.030 From vendor
FO2 0.2% S CAT	3116DIT C	2300	201.15	not eval.	150	not eval.	not eval.	not eval.	not eval.	5	0.26	0.037 From vendor
FO2 0.2% S CAT	3116DIT C	2100	194.445	not eval.	145	not eval.	not eval.	not eval.	not eval.	5	0.22	0.033 From vendor
FO2 0.2% S CAT	3116DIT C	2100	181.055	not eval.	135	not eval.	not eval.	not eval.	not eval.	5	0.22	0.033 From vendor
FO2 0.2% S CAT	3116DIT C	2000	174.33	not eval.	130	not eval.	not eval.	not eval.	not eval.	5	0.22	0.030 From vendor

AAB Continuous
C Intermittent

Condition 5

Legal Basis: [18 AAC 50.055(c), 1/18/97]
[18 AAC 50.350(d)(1)(C), 6/21/98]
[18 AAC 50.350(g) – (i), 1/18/97]
[18 AAC 50.410(c), 1/18/97]

The condition applies to operation of all fuel-burning equipment in the State of Alaska.

Factual basis: The condition re-iterates a sulfur emission standard applicable to fuel-burning equipment. The Permittee may not cause or allow their equipment to violate this standard.

Diesel Fuel: Diesel fuel sulfur is measured in weight percent sulfur. Calculations show that fuel containing no more than 0.5% sulfur will always comply with the emission standard. This is true for all liquid hydrocarbon fuels, even with no excess air. Verification of ASTM fuel grade as No. 1 or No. 2 fuel oil will certify compliance with the standard because these fuel oils always have a fuel sulfur content of no more than 0.5%. For fuels with a sulfur content higher than 0.5%, this condition requires the Permittee to use the equations in Section 15 to calculate the exhaust gas SO₂ concentration, showing whether the standard was exceeded. The equations in Section 15 are all based on stoichiometric mass balance. The ADEC Air Permits Web Site contains the supporting calculations at

<http://www.state.ak.us/dec/dawq/aqm/newpermit.htm>

Fuel Gas: Fuel gas sulfur is measured as hydrogen sulfide, i.e. H₂S concentration in ppm by volume. Calculations show that fuel gas containing no more than 4000 ppm H₂S will always comply with this emission standard. This is true for all fuel gases, even with no excess air. The calculations supporting this assertion are posted on the ADEC Air Permits Web Site at

<http://www.state.ak.us/dec/dawq/aqm/newpermit.htm>

Equations to calculate the exhaust gas SO₂ concentrations resulting from the combustion of fuel gas were not included in this permit. Fuel gas with an H₂S concentration of even 10% of 4000 ppm is currently not available in Alaska and is not projected to be available during the life of this permit.

SO₂ Potential to Emit (PTE): The SO₂ PTE is based on 0.5% by weight sulfur of the diesel fuel and 4000 ppm H₂S by volume of the fuel gas. If these fuel sulfur assumptions, i.e. 0.5% and 4000 ppm, are exceeded, then the SO₂ PTE could be exceeded depending on the hours of operation and the rate of fuel consumption. In any case, this facility will not be classified under 18 AAC 50.325(b)(1) for SO₂ at 0.5% and 4000 ppm. However, the department may, in its discretion, under the authority of 18 AAC 50.201(a) require the Permittee to evaluate the effect of the facility's SO₂ emissions on ambient air before allowing the fuel sulfur concentration to exceed the 0.5% and 4000 ppm fuel sulfur assumptions in this permit.

Condition 6

Legal Basis: [Construction Permit No. 0025-AC026, 1/8/01]
[18 AAC 50.350(d)(1)(D), 1/18/97]
[EPA PSD X79-10, 8/2/79]

Factual Basis: This condition continues the EPA PSD X79-10 approved BACT limits for Source ID 1. Construction Permit No. 0025-AC026 included voluntary fuel limits taken by the source to reduce emissions and classify Source ID 1 as a “synthetic minor.” The facility classification remains a Prevention of Significant Deterioration (PSD) Major Facility under EPA PSD X79-10.

Condition 7

Legal Basis: [Construction Permit No. 0025-AC026, 1/8/01]
[18 AAC 50.350(d)(1)(D), 1/18/97]

Factual Basis: This condition authorizes the operation of Source ID 3 only to support startup of Source IDs 1–2 during a power outage and for periodic inspection and maintenance of these units.

Condition 9

Legal Basis: [Construction Permit No. 0025-AC026, 1/8/01]
[18 AAC 50.350(d)(1)(D), 1/18/97]

Factual Basis: This condition requires the development and implementing of specific operation and preventive maintenance manuals for Source IDs 1-3.

Conditions 9–13

Legal Basis: [18 AAC 50.040(a)(1), 7/2/00]
[18 AAC 50.040(a)(2)(V), 7/2/00]
[Federal Citation 40 C.F.R. 60. Subpart A, 7/1/99]

Factual Basis: Subpart A contains notification, monitoring, record keeping, and reporting requirements. These conditions detail the initial source testing requirements for turbines under this permit. Conditions 9 –13 require the maintenance of records of malfunctions of NSPS sources or pollution control or monitoring equipment. The conditions require that sources be operated in accordance with good air pollution control practices to minimize emissions. The conditions restate the federal credible evidence rule and the prohibition against the use of gaseous diluents to achieve compliance with an opacity standard. All of these requirements are from 40 C.F.R. 60 Subpart A.

Condition 14

Legal Basis: [18 AAC 50.040(a)(2)(M), 7/2/00]
[Federal Citation: 40 C.F.R. 60.110b(c), 7/1/99]
[Federal Citation: 40 C.F.R. 60.116b(a) – (b), 7/1/99]

Factual basis: Source IDs 5–6 were built or modified after July 23, 1984. The sources have a storage capacity of 27,000 gallons. The sources store a volatile liquid with a maximum true vapor pressure of less than 3.5 kPa. Therefore, the sources are subject to 40 C.F.R. 60.116b(a) and (b). This permit condition requires the same records as 40 C.F.R. 60.116b(a) and (b).

Because the condition is a permanent recordkeeping condition, no monitoring or reporting is required.

Conditions 15–21

Legal Basis: [18 AAC 50.040(a)(1) & (2)(V), 7/2/00]
[40 CFR 60 Subpart A, GG and Appendices A, B, & F, 7/1/99]

Factual Basis: The U.S. Environmental Protection Agency (EPA) regulates New Source Performance Standards (NSPS). The intent of NSPS is to provide technology-based emission control standards. EPA may delegate to each state the authority to implement and enforce standards of performance for new stationary sources located in that state. The department has incorporated by reference the NSPS for specific industrial activities, as listed in 18 AAC 50.040. However, EPA has not delegated to the department the authority to administer the NSPS program at this time.

Turbines that are subject to Subpart GG for Stationary Gas Turbines are rated greater than 10.7 gigajoules per hour (10 MMBtu/hr), based on the lower heating value of fuel fired and constructed, modified, or reconstructed after October 3, 1977. An affected facility subject to an NSPS Subpart is also subject to Subpart A, General Provisions.

Condition 15

Legal Basis: [18 AAC 50.040(a)(2)(V), 7/2/00 and 18 AAC 350(g) – (i), 1/18/97]
[40 CFR 60.332, 7/1/99]

Factual Basis: The corrected exhaust gas concentration in condition 16 was determined based on source test results. Condition 15.2 allows flexibility to the Permittee in determining fuel nitrogen, fuel sulfur and alternative reference methods.

Conditions 16

Legal Basis: [18 AAC 50.350(g)-(i), 1/18/97; 18 AAC 50.220(a)-(c),
18 AAC 50.040(a)(1)]
[40 CFR 60.8, 7/1/99]

Factual Basis: The department has added periodic monitoring requirements to those turbines that have operating limits. The monitoring is required to make sure the turbines emit at rates below their limits. The initial frequency of the source testing (monitoring) is dependent upon the results of prior source tests or emission factors from the manufacturer or AP-42.

The most recent test results are below 80% of the NO_x limit. Therefore, the Permittee shall conduct source tests once within the life of the permit, i.e., every five years.

Conditions 17–18

Legal Basis: [18 AAC 50.040(a)(2)(V), 7/2/00]
[40 CFR 60.333, 40 CFR 60.334 7/1/99]
[40 CFR 60.8, 7/1/99]

Factual Basis: Affected turbines are subject to the SO₂ standards as stated in 40 CFR 60.333. The owner or operator shall not discharge gases into the atmosphere from a stationary gas turbine with SO₂ in excess of 0.015% by volume (150 ppmvd) at 15% O₂ and on a dry basis, or no owner or operator shall burn fuel with greater than 0.8% sulfur by weight.

Permit condition 18 sets the frequency of fuel sulfur and nitrogen determinations. It incorporates the applicant's fuel sulfur limit with NSPS monitoring, reporting, and testing requirements.

The Permittee shall maintain records of all sulfur monitoring data for five years as set out in 18 AAC 50.350(h)(5). The applicant shall maintain records documenting the fuel supplier or source. A substantive change in fuel quality shall be considered as a change in fuel supply.

The Permittee shall determine compliance with the sulfur dioxide standard per 40 CFR 60.335(d). The Permittee shall use methods described in this section—ASTM D 1072-80, D3031-81, D4084-82, or D3246-81, or EPA-approved alternative. The applicant may use fuel analysis performed by owner/operator, service contractor, fuel vendor, or other qualified agency pursuant to 60.335(f).

The conditions incorporate Federal test methods by reference.

Condition 19

Legal Basis: [Construction Permit No. 0025-AC026, 1/8/01]
[18 AAC 50.350(d)(1)(D), 1/18/97]
[40 CFR 60.335(f)(1), 7/1/99]

Factual Basis: This condition allows flexibility to the Permittee in determining fuel nitrogen, fuel sulfur and alternative reference methods.

Conditions 20–21

Legal Basis: [18 AAC 50.040(a)(2)(V), 7/2/00 & 18 AAC 50.350(g)-(i), 1/18/97]
[40 CFR 60.7, 60.11 & 60.12, 7/1/99]

Factual Basis: Condition 20 describes exactly what is required to be in an excess emission report and condition 21 requires the Permittee to submit a quarterly excess emission report for Source ID 2.

Conditions 22–26

Legal Basis: [Construction Permit No. 0025-AC026, 1/8/01]
[18 AAC 50.350(d)(1)(D), 1/18/97]
[18 AAC 50.350(g)-(i), 1/18/97]

Factual Basis: These conditions impose Permittee requested fuel limits and NO_x controls on the facility to avoid emissions of NO_x greater than 249 tons per year and avoid classification as a Prevention of Significant Deterioration Major Facility. SoLoNO_x controls on Source ID 2 are required to limit NO_x emissions to no more than 22.1 lb per hour and 96ppm. The requisite monitoring, recordkeeping and reporting are included in these conditions.

Conditions 27–29

Legal Basis: [18 AAC 50.050(a)(2), 1/18/97]
[18 AAC 50.055(a)(1), 1/18/97]
[18 AAC 50.055(b)(1), 1/18/97]
[18 AAC 50.055(c), 1/18/97]

Factual basis: These are general emission standards which apply to all industrial processes fuel-burning equipment, and incinerators regardless of size. The conditions re-iterate the general standards and require compliance for insignificant sources. The Permittee may not cause or allow their equipment to violate these standards. Insignificant sources are not listed in the permit unless specific monitoring, recordkeeping and reporting are necessary to ensure compliance.

The department finds that the insignificant sources at this facility do not need specific monitoring, recordkeeping and reporting to ensure compliance.

Condition 30

Legal Basis: [18 AAC 50.350(m)(3), 9/4/98]

Factual Basis: The regulations require the Permittee to certify that their insignificant sources comply with applicable requirements. The condition restates the regulatory requirement.

Condition 31

Legal Basis: [18 AAC 50.040(b)(3) & 18 AAC 50.350(d)(1), 1/18/97]

[Federal Citation: 40 C.F.R. 61, Subpart M, 12/19/96]

If the Permittee engages in asbestos demolition and renovation, then these requirements may apply.

Factual Basis: The condition cites and requires compliance with the regulations that will apply if the Permittee engages in asbestos demolition or renovation. Because these regulation include adequate monitoring and reporting requirements and because the Permittee is not currently engaged in such activity, simply citing the regulatory requirements is sufficient.

Condition 32

Legal Basis: [18 AAC 50.040(d) & 18 AAC 50.350(d)(1), 1/18/97]

[Federal Citation: 40 C.F.R. 82, Subpart F, 7/1/97]

Factual Basis: The condition cites and requires compliance with the regulations that will apply if the Permittee uses certain refrigerants. Because these regulation include adequate monitoring and reporting requirements and because the Permittee is not currently engaged in such activity, simply citing the regulatory requirements is sufficient.

Condition 33

Legal Basis: [18 AAC 50.030, 12/30/00 & 18 AAC 50.350(f)(2)-(3), 1/18/97]

Factual basis: Maintaining and operating equipment in good working order is fundamental to preventing unnecessary or excess emissions. Standard conditions for monitoring compliance with emission standards are based on the assumption that good maintenance is performed. Without appropriate maintenance, equipment can deteriorate much more quickly, and periodic monitoring that is not continuous would be needed much more frequently to be sure that it is representative.

Records should be kept and available to the department. Records of deferred maintenance can be a reasonable trigger for requesting source testing.

For most existing equipment, the department does not specify that the Permittee must follow manufacturer's recommendations. If the manufacturer's recommendations are not suitable for Alaskan conditions, or don't relate to minimizing emissions, the Permittee can see that they are changed as a condition of purchase for existing equipment. The requirement for complying with manufacturer's recommendations or with a specific operation and maintenance plan is included for control equipment because the efficient operation of control equipment directly relates to emissions, and the department does not anticipate that Alaskan conditions will require drastically different O & M.

It is not the department's intent in specifying manufacturer's recommendations to include those that endorse only the manufacturer's line of replacement parts. The condition states that any suitable replacement parts or equipment can be used.

Condition 34

Legal Basis: [18 AAC 50.045(a), 1/18/97]

Applies to the Permittee because the Permittee must comply with emission standards in 18 AAC 50.

Factual Basis: The requirement prohibits diluting emissions as a means of compliance. In practical terms, dilution only affects compliance when the emissions are being measured. Careful reviews of source test plans and operating conditions should reveal any dilution as a result of the introduction of non-process air into the exhaust.

Condition 35

Legal Basis: [18 AAC 50.040(e), 7/2/00]

[18 AAC 50.045(d), 1/18/97]

[18 AAC 50.350(d)(1), 1/18/97]

[18 AAC 50.350(g) – (i), 1/18/97]

Applies to the Permittee because the Permittee will engage in industrial activity at the facility.

Factual Basis: The condition restates the regulatory prohibition on fugitive dust. This prohibition calls for reasonable precautions to be taken to prevent particulate matter from being emitted into the ambient air while engaged in industrial activities.

The Permittee must keep records describing all precautions taken to prevent particulate matter from becoming airborne due to any of the activities described in this condition. If the precautions are not listed in the State Air Quality Control Plan, then the Permittee must also record a statement describing why the Permittee believes the precaution is reasonable. This monitoring ensures that the Permittee takes the reasonable precautions and has a reason for deciding if the precaution is reasonable.

The Permittee must perform visual surveys at least once each month, and take corrective action if particulate matter is observed leaving the property. This is intended to identify whether the reasonable precautions taken are working, and to correct the problem if the precautions are not working.

Condition 36

Legal Basis: [18 AAC 50.055(g) & 18 AAC 50.310(m), 1/18/97]

Applies to the facility because the facility contains a stack or source modified after November 1, 1982.

Factual Basis: The condition restates the prohibition on stack injection (i.e. disposing of material by injecting it into a stack). No specific monitoring for this condition is practical. Compliance is ensured by inspections, because the source or stack would need to be modified to accommodate stack injection.

Condition 37

Legal Basis: [18 AAC 50.040(e), 7/2/00]
[18 AAC 50.065(a) – (e), 1/18/97]
[18 AAC 50.350(d)(1), 1/18/97]
[18 AAC 50.350(g) – (h), 1/18/97]

These conditions apply if the Permittee conducts open burning at the facility.

Factual Basis: The condition requires the Permittee to comply with the regulatory requirements when conducting open burning at the facility.

Not specific monitoring is required for this condition. The permit does require the Permittee to keep "sufficient records" to demonstrate compliance with the standards for conducting open burning, but does not specify what these records should contain.

More extensive monitoring and recordkeeping is not warranted because the Permittee does not conduct open burning as a routine part of their business. Also, most of the requirements are prohibitions, which are not easily monitored. Additional monitoring is achieved through condition 38, which requires a record of complaints. Therefore, the department does not believe that additional monitoring is warranted.

Condition 38

Legal Basis: [18 AAC 50.040(e), 7/2/00]
[18 AAC 50.110, 5/26/72]
[18 AAC 50.240(c), 1/18/97]
[18 AAC 50.350(d)(1), 1/18/97]
[18 AAC 50.350(g) – (i), 1/18/97]

Applies to the facility because the facility will have emissions.

Factual Basis: The condition restates the general prohibition on injurious air emissions, which applies to any emissions from the facility. While the other permit conditions and emissions limitation should ensure compliance with this condition, unforeseen emission impacts can violate this standard. These violations would go undetected except for complaints from affected persons. Therefore, to monitor compliance, the Permittee must monitor and respond to complaints.

The Permittee is to report any complaints and injurious emissions. The plant does not handle any large quantities of hazardous air pollutants. The Permittee must keep records of the date, time, and nature of all complaints received and summary of the investigation and corrective actions undertaken for these complaints and to submit copies of these records upon request of the department.

Condition 39

Legal Basis: [18 AAC 50.235(a) & 18 AAC 50.350(f), 1/18/97]

Applies to the facility because the facility contains equipment subject to a technology-based emission standard.

Factual Basis: This condition restates a regulation that requires the Permittee to take reasonable steps to minimize emissions if certain activity causes exceedance of a technology-based emission standard. Because the technology-based emission standard itself is a condition of the permit, the Permittee will report the excess emissions under condition 53. Because the excess emission report requires information on the steps taken to minimize emissions, this report is adequate monitoring for compliance with this condition.

Condition 40

Legal Basis: [18 AAC 50.335(a), 1/18/97]

Applies if the Permittee intends to renew the permit.

Factual Basis: The condition restates the regulatory deadlines, citing the specific dates applicable to the facility. Submittal of the renewal application is sufficient monitoring, recordkeeping and reporting.

Condition 41

Legal Basis: [18 AAC 50.220(a) & 18 AAC 50.345(a)(10), 1/18/97]

Standard condition to be included in all permits.

Factual Basis: Condition requires the Permittee to conduct source tests as requested by the department, therefore no monitoring is needed. Conducting the requested source test is its own monitoring.

Conditions 42–44

Legal Basis: [18 AAC 50.030, 12/30/00]

[18 AAC 50.035, 7/2/00]

[18 AAC 50.040, 7/2/00]

[18 AAC 50.220(b) – (c), 1/18/97]

[18 AAC 50.350(g), 1/18/97]

[18 AAC 50.990(88), 1/18/97]

[Federal Citation: 40 C.F.R. 51, Appendix M, 7/1/97]

[Federal Citation: 40 C.F.R. 60, 40 C.F.R. 61, 40 C.F.R. 63, 7/1/99]

Applies when the Permittee is required to conduct a source test.

Factual Basis: These conditions restate regulatory requirements for source testing. As such, they supplement the specific monitoring requirements stated elsewhere in this permit. The tests reports required by later conditions adequately monitor compliance with these conditions, therefore no specific monitoring, reporting, or recordkeeping is needed.

Conditions 45–47

Legal Basis: [18 AAC 50.345(a)(10), 1/18/97]
[18 AAC 50.350(b)(3), 1/18/97]
[18 AAC 50.350(g) – (i), 1/18/97]

Applies when the Permittee is required to conduct a source test.

Factual Basis: Standard condition 18 AAC 50.345(a)(10) is incorporated through these three conditions. Because this standard condition supplements specific monitoring requirements stated elsewhere in this permit, no monitoring, reporting, or recordkeeping is required. The source test itself is adequate to monitor compliance with this condition.

Condition 48

Legal Basis: [18 AAC 50.220(f) & 18 AAC 50.350(g), 1/18/97]

Applies when the Permittee tests for compliance with the particulate matter standard.

Factual Basis: The condition incorporates a regulatory requirement for particulate matter source tests. The Permittee must use a certain equation to calculate the particulate-matter emission concentration from the source test results. Because this condition supplements specific monitoring requirements stated elsewhere in this permit, no monitoring, reporting, or recordkeeping is required.

Condition 49

Legal Basis: [18 AAC 50.205, 1/18/97]
[18 AAC 50.345(a)(9), 1/18/97]
[18 AAC 50.350(b)(3), 1/18/97]
[18 AAC 50.350(i), 1/18/97]

Applies because the permit requires the Permittee to submit reports, and because the condition is a standard condition.

Factual Basis: This condition restates the regulatory requirement that all reports must be certified. To ease the certification burden, the condition allows the excess emission reports to be certified with the semi-annual operating report, although the excess emission reports must be submitted more frequently. This condition supplements the reporting requirements of the permit and no monitoring, recordkeeping or reporting for this condition is needed.

Condition 50

Legal Basis: [18 AAC 50.350(i), 1/18/97]

Applies because the Permittee is required to send reports to the department.

Factual Basis: This condition merely specifies where submittals to the department should be sent. Receipt of the submittal at the correct department office is sufficient monitoring for

this condition. This condition supplements the reporting requirements of the permit and no monitoring, recordkeeping or reporting for this condition is needed.

Condition 51

Legal Basis: [18 AAC 50.200, 1/18/97]
[18 AAC 50.345(a)(8), 1/18/97]
[18 AAC 50.350(b)(3), 1/18/97]
[18 AAC 50.350(g) – (i), 1/18/97]

Applies to all Permittees, and incorporates a standard condition

Factual Basis: Incorporates a standard condition in regulation, which tells the Permittee to submit information requested by the department. Receipt of the requested information is adequate monitoring.

Condition 52

Legal Basis: [18 AAC 50.350(h), 1/18/97]

Applies to records required by a permit.

Factual Basis: The condition restates the regulatory requirements for recordkeeping, and supplements the recordkeeping defined for specific conditions in the permit. The records being kept provide adequate evidence of compliance with this requirement, therefore, no additional monitoring, recordkeeping or reporting is required.

Condition 53

Legal Basis: [18 AAC 50.235(a)(2), 18 AAC 50.240(c) & 18 AAC 50.350(i), 1/18/97]

Applies when the emissions or operations deviate from the requirements of the permit.

Factual Basis: This condition satisfies two regulatory requirements related to excess emissions—the technology-based emission standard regulation and the excess emission regulation. Although there are some differences between the regulations, the condition satisfies the requirements of each regulation.

The condition does not mandate the use of the department's reporting form, but it does specify that the information listed on the form must be included in the report.

The reports themselves and the other monitoring records required under this permit provide an adequate monitoring of whether the Permittee has complied with the condition. Therefore, no additional monitoring, recordkeeping or reporting is required.

Condition 54

Legal Basis: [18 AAC 50.040, 7/2/00 & 18 AAC 50.350(i)(2), 1/18/97]
[Federal Citation: 40 C.F.R. 60 & 40 C.F.R. 61, 7/1/99]

Applies to facilities subject to NSPS and NESHAP federal regulations.

Factual Basis: The condition supplements the specific reporting requirements in 40 C.F.R. 60 and 40 C.F.R. 61. The permit does not need any monitoring, recordkeeping or reporting. The reports themselves are adequate monitoring for compliance with this condition.

Condition 55

Legal Basis: [18 AAC 50.350(d)(4), 1/18/97]
[18 AAC 50.350(f)(3), 1/18/97]
[18 AAC 50.350(i), 1/18/97]
Applies to all permits.

Factual Basis: The condition restates the requirements for reports listed in regulation. The condition supplements the specific reporting requirements elsewhere in the permit and does not need any monitoring, recordkeeping or reporting. The reports themselves are adequate monitoring for compliance with this condition.

Condition 56

Legal Basis: [18 AAC 50.350(j), 1/18/97]
[18 AAC 50.350(d)(4), 1/18/97]
Applies to all Permittees.

Factual Basis: This condition specifies the periodic compliance certification requirements, and specifies a due date for the annual compliance certification. Because this requirement is a report, no monitoring, recordkeeping or reporting is needed.

Condition 57

Legal Basis: [18 AAC 50.350(f)(3), 1/18/97]
[Federal Citation: 40 C.F.R. 52.12(c), 7/1/99]
Applies to all federally approved permits.

Factual Basis: This condition clarifies that any credible evidence can be used to verify compliance with the permit, not just the monitoring required under the permit. This condition is necessary to ensure compliance with the Clean Air Act. No monitoring, recordkeeping, or reporting is necessary for this condition.

Conditions 58–64

Legal Basis: [18 AAC 50.345(a)(1) – (7) & 18 AAC 50.350(b)(3), 1/18/97]
Applies to all operating permits.

Factual Basis: These are standard conditions required for all operating permits.

Condition 65

Legal Basis: [Construction Permit No. 0025-AC026, 1/8/01]
[18 AAC 50.350(d)(1)(D), 1/18/97]

Factual Basis: This condition requires the Permittee to keep a copy of this permit, the State Air Quality Regulations listed in 18 AAC 50, and Alaska Statutes 46.14, at the permitted facility.

Conditions 66–70

Legal Basis: [18 AAC 50.350(l), 1/18/97]

Applies because the Permittee has requested a shield for the applicable requirements listed under this condition.

Factual Basis: Table 3 explains the permit shield requests and the department's applicability determination. The permit conditions sets forth the requirements that the department determined were not applicable to the facility, based on the permit application, past operating permit, construction permits and inspection reports.

Table 3. Permit Shield Decision

Shield requested for:	Shielded?	Reason for shield decision
40 C.F.R. 60 Subpart A for Sources IDs 4–5	Yes	Per 60 110b(c) tanks #1 & #2, storing 27,000 gallons each of organic liquid with a maximum true vapor pressure less than 3.5 kPa, are exempt from the General Provisions of 40 C.F.R. 60 Subpart A.
40 C.F.R. 60 Subparts K & Ka	Yes	Applicant certified Insignificant Source IDs 4–5 were installed after July 24, 1984 and that are therefore none of standards are applicable.
40 C.F.R. 60 Subparts Kb 60.112b–60.115b	Yes	Per 60 110b(c) tanks #1 & #2, storing 27,000 gallons each of volatile organic liquid with a maximum true vapor pressure less than 3.5 kPa, are exempt from 60.112b–60.115b.
40 C.F.R. 72	Yes	AK exempt from acid rain regulations.
40 C.F.R. 82, except Subpart F	Yes	The facility does not manufacture, produce, transform, import, export, service, sell or distribute Class I or Class II substances.

Conditions 71–77

Legal Basis: [18 AAC 50.350(g) – (i), 1/18/97]

Applies because these conditions detail the monitoring, recordkeeping, and reporting required in conditions 3 and 4.

Factual Basis: Each permit term and condition must include monitoring, recordkeeping and reporting for the Permittee to show verifiable compliance with each permit term and condition.